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Hazardous or Difficult to Handle Waste. Survey Report

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THE REPORT DOCUMENTS VARIOUS TYPES OF WASTE WITH WHICH THE STATE NEEDS TO BE CONCERNED. IT PROVIDES A GOOD INDICATION OF THE QUANTITY AND GEOGRAPHICAL DISTRIBUTION OF THE WASTES FOUND IN THE SEVEN S.I.C. CODES SURVEYED (S.I.C. 22, 27, 28, 33, 34, 35 & 36). STATISTICAL APPLICATION PROJECTED THIS INFORMATION TO PROVIDE A BETTER PICTURE OF INDUSTRY AND ASSOCIATED WASTE PROBLEMS STATEWIDE BY COUNTY AND S.I.C. CODE.

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HAZARDOUS OR DIFFICULT TO HANDLE WASTE

SURVEY REPORT

State of North Carolina
Department of Human Resources
Raleigh, North Carolina
October 1978

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HAZARDOUS

OR

DIFFICULT TO HANDLE WASTE

SURVEY REPORT

COLOR ILLUSTRATIONS REPRODUCED
IN BLACK AND WHITE

STATE OF NORTH CAROLINA

DEPARTMENT OF HUMAN RESOURCES

RALEIGH, NORTH CAROLINA

OCTOBER 1978

STATE OF NORTH CAROLINA

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Acknowledgement is also hereby given to all those individuals in industries surveyed and in government who cooperated in many ways during this survey.

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INTRODUCTION

Background

Hazardous waste and hard to handle waste storage and disposal problems have increased dramatically in the past few years. Public concern over these problems has promoted the passage of both Federal and State legislation. This legislation, designed to protect the environment and the health of the public, has helped to bring these problems to the attention of almost everyone. The Clean Air Act Amendments of 1970; the Federal Water Pollution Control Act Amendments of 1972; the Marine Protection, Research, and Sanctuaries Act of 1972; the Safe Drinking Water Act of 1974; and the Resource Conservation and Recovery Act of 1976 (Public Law 94-580) are all examples of Federal Legislation which are limiting waste discharges into our environment.

Federal and subsequent State legislation have required the concentration and removal of contaminants which previously had been discharged in more dilute waste streams. A primary result of this is that more concentrated wastes are being diverted to land disposal.

In North Carolina, the Solid Waste Management Act of 1969 required the permitting of all sanitary landfills and the closure of open dumps.

"Hazardous waste" as defined by House Bill 1201, ratified in the Second Session of the 1978 North Carolina General Assembly, means "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may:

(a) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or

(b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

Hard to handle wastes may be defined as those whose physical properties cause

handling and/or disposal problems. They may or may not be hazardous in themselves. Examples of such wastes are sizable quantities of dusts or fines collected from filter systems in air handling units, chicken feathers, sawdust, and asbestos dust. Other wastes have been classified as hard to handle due to high moisture content or adhesive properties.

Objectives

The objective of the survey was to collect data required to assess the current status of industrial hazardous waste generation and disposal practices in North Carolina. A preliminary survey conducted in Mecklenburg County (Charlotte area) in 1975-76 showed that the seven S.I.C. Codes selected for this survey (S.I.C. Codes 22, 27, 28, 33, 34, 35, and 36) had the greatest potential for having these wastes of all the codes surveyed. Therefore, these seven codes were selected for a more comprehensive survey statewide.

Based on the information gained from this survey, needs could be determined and specific recommendations could be made for legislation as required. Also, policies and regulations could be implemented which would ensure proper hazardous waste management.

The following were the specific objectives of the survey:

1. Identify the sources of hazardous waste.
    a. Geographical distribution (by county)
    b. Products produced by Standard Industrial Classification (S.I.C.) Code
    c. Size of facilities (based on number of employees in each)
2. List the total quantity of hazardous waste actually generated in North Carolina in the facilities surveyed within the seven codes during 1976.
    a. Total quantity
    b. Type or class of waste

c. Geographic distribution (by county)

3. Estimate statistically the total quantity of hazardous waste generated in North Carolina during 1976 within the seven codes surveyed.

   a. Total quantity

   b. Geographic distribution (by county)

4. Establish a readily retrievable bank of information on sources surveyed.

   a. Name of source

   b. Geographic information (by county)

   c. Standard Industrial Classification Code

   d. Type or types of hazardous waste generated

   e. Disposal methods or destinations

Survey Procedure

The survey was conducted by making on-site visits to the facilities being surveyed. A letter was written to a responsible official, usually the general manager or president of each facility. The details of the survey were explained and a copy of the survey questionnaire to be used was enclosed. In that way the individual involved with the survey could have time to obtain the information requested prior to the visit of the surveyor.

During the visit, the surveyor would complete the questionnaire with the help of someone being interviewed. This person would be either the management official contacted previously by letter or someone designated by him. The surveyor would also tour the facility with this person to obtain information which would be as accurate as possible and to obtain answers to as many questions as necessary. Industry personnel were told that response to this survey was purely voluntary.

There was very good cooperation from industry in this survey. There were very few refusals of either information or permission to tour the facility.

Laboratory Support

One full-time chemist was employed in connection with the hazardous waste survey to give background support for the hazardous waste management program. Over a period of approximately fourteen months, this individual performed a total of 1,887 different tests and analyses on a total number of 194 samples. These samples were collected from a total of 49 of the various facilities cooperating in the survey and the program.

Facilities of the Environmental Sciences, Laboratory Section, Division of Health Services, were made available for use by the chemist in the tests and analyses which he performed.

Survey Results

The results of the survey are tabulated in Tables No. 1 through No. 16 and in Maps No. 1 through No. 9. These are grouped together by S. I. C. Code to make it more convenient to study each code individually if one desires.

Tables No. 1 and No. 2 are summaries of the whole basic report. In Table No. 1, the number and size (S for small, L for large) of the facilities (Fac.) are listed by S.I.C. Code for each county in the state. The volume (Vol.) in gallons is listed in the same box by S.I.C. Code for each county also. This is total volume, based on actual survey results and by S.I.C. Codes for all facilities surveyed within that county, both small and large. The column on the right lists total volume for all S.I.C. Codes by county.

The total volume (gallons) of waste is totaled for each S.I.C. Code on the bottom of the final page of Table No.1. The grand total of all waste actually surveyed for all seven S.I.C. Codes and for all counties in the state is the bottom right-hand figure on this final page.

Table No. 2 is similar to Table No. 1 and is set up the same way. Table No. 2, however, lists all figures as statistical results based on the number of both small and large facilities actually located within each county by S. I. C. Code number. The mean quantity of waste was determined statistically per facility for both small and large industries. The quantity per county was obtained by multiplying these mean quantities by the number of facilities listed per county and adding the totals for both small and large.

Total volume of wastes (statistical) is totaled for each S.I.C. Code on the bottom of the final page of Table No. 2. Similarly, the statistical grand total of wastes generated for all seven S.I.C. Codes and for all counties in the state is the figure in the bottom right-hand corner on the final page.

Approximately 825 manufacturing facilities were surveyed within the seven S.I.C. Codes selected. These represent approximately 23 percent of the

total of about 3,586 facilities in business within the state in these seven code During 1976, these firms surveyed generated 22,854,917 gallons of actual waste. It can be seen, therefore, that a large quantity of hazardous and/or hard to handle waste is generated within the state.

As might be expected, the area where industry is most concentrated also generally produces the most waste. This area consists of the western part of the coastal plain, the piedmont, and the eastern mountain counties. There are a few exceptions, however, as Map No. 8 will show. Notable among these are Edgecombe, Pitt, Lenoir, and New Hanover Counties in the eastern and southern part of the coastal plain. The extreme eastern and western counties of the state showed little or no waste in the hazardous and hard to handle categories.

The main types of wastes noted in the survey are shown in the various S.I.C. Code tabulations - Tables No. 3 through No. 16. The main materials encountered were characteristic of the industry groups in which they were found. However, there were some wastes common to most of the seven S.I.C. Code facilities surveyed such as waste oils, solvents, and various paint sludges.

The state maps for each of the seven S.I. C. Codes studied show the actual range of quantity of wastes found during the survey. They are arranged so that each succeeding color indicates ten times the waste of the preceding color.

It was found during the survey that much of the hazardous wastes and hard to handle wastes were being disposed of within the State in environmentally unacceptable ways. Some were being poured down sanitary sewers, some were going on plant property and some were going to sanitary landfills.

In the statistical analysis, while the sample sizes for all S.I.C. Codes surveyed were satisfactory in the case of proportions, they were far from satisfactory in the case of total quantities due to the great variations in volume. For this reason the volume estimates should be used with extreme caution.

ANALYSIS

The manufacturing industries in North Carolina generate very significant quantities of hazardous wastes and hard to handle wastes. These wastes require environmentally safe disposal methods for the protection of public health and the environment. Their quantities will increase with the projected continued industrial expansion and growth within the State. Also, quantities of various materials which previously were discarded in other forms will eventually become residual sludges, solids or hard to handle liquids. These quantities will increase with changing disposal technology and the decrease in disposal by illegal and unacceptable means. Changes in regulations and better enforcement of present regulations will work together to reduce these latter quantities.

This survey has been very helpful in pointing out many of the various types of wastes with which the state needs to be concerned. It has also provided a good indication of the quantity and geographical distribution of the wastes found in the 7 S.I.C. Codes surveyed. Statistical application projects this information to provide a better picture of industry and associated waste problems statewide by county and code number. It has given the basic information needed within the S.I.C. Codes studied.

One of the needs brought out by this survey is for a similar study across other S.I.C. Codes. There are other large and high priority segments of our manufacturing industry with which our agency is relatively unfamiliar regarding hazardous and hard to handle wastes. Some of these are foods, furniture, paper, rubber and plastics and transportation equipment.

A study of these other types of industries would provide the information necessary to better understand the disposal practices and problems with which they are involved. This in turn would provide more opportunity to help these industries in addition to providing better control of what goes into the environment. This agency wishes to stress its commitment to aid industry in every reasonable manner possible.

One of the greatest needs found in this survey and in follow-up calls and contacts is for the establishment of hazardous waste management facilities within the state. At the present time there are none. This makes it necessary for much of the hazardous wastes to be shipped out of state for proper disposal.

RECOMMENDATIONS

1. It is recommended that similar studies be undertaken across other S.I.C. Codes in order to obtain a more complete picture of the statewide waste problem.

2. It is recommended that hazardous waste management facilities be located within the State to provide acceptable alternatives for recovery, treatment, storage, or disposal of hazardous wastes.

3. In order to provide adequate enforcement, it is recommended that adequate legislation and regulations be provided for statewide management of hazardous and hard to handle wastes.

4. It is recommended that governments at all levels continue to cooperate with industry in seeking mutually acceptable means of waste management.

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Breakdown of Various Types of Wastes

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Breakdown of Various Types of Wastes

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SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON ACTUAL SURVEY RESULTS

TABLE 1

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Alamance	Fac.	2-S 2-L	0	2-S	1-L	0	2-S 2-L	0	
	Vol.	710	0	2,510	500	0	1,268	0	4,988
Alexander	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Alleghany	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Anson	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Ashe	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Avery	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	1-L	
Beaufort	Fac.	0	0	0	0	0	0	600	600
	Vol.	0	0	0	0	0	0	0	
Bertie	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Bladen	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Brunswick	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	

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		22	27	28	33	34	35	36	
Buncombe	Fac.	0	1-S 2-L	0	1-S	0	0	3-S 5-L	
	Vol.	0	18,501	0	100	0	0	109,114	127,715
Burke	Fac.	1-L	1-L	1-S	0	0	1-S	2-L	
	Vol.	57,000	72	28,000	0	0	1,200	74,500	160,772
Cabarrus	Fac.	0	1-L	0	0	1-L	0	0	
	Vol.	0	1	0	0	13,750	0	0	13,751
Caldwell	Fac.	1-L	1-S	1-L	0	0	0	0	
	Vol.	5,000	30	144,058	0	0	0	0	149,088
Camden	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Carteret	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Caswell	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Catawba	Fac.	0	1-S 3-L	2-S	0	0	1-S	0	
	Vol.	0	839	42,380	0	0	14,000	0	57,219
Chatham	Fac.	1-L	0	1-S	0	0	0	0	
	Vol.	300	0	38,896	0	0	0	0	39,196
Cherokee	Fac.	0	0	0	0	0	0	1-L	
	Vol.	0	0	0	0	0	0	70	70

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TABLE 1

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		22	27	28	33	34	35	36	
Chowan	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Clay	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Cleveland	Fac.	0	0	0	1-S	0	0	0	
	Vol.	0	0	0	300	0	0	0	300
Columbus	Fac.	0	0	1-L	0	0	0	0	
	Vol.	0	0	8,403	0	0	0	0	8,403
Craven	Fac.	0	0	1-L	0	0	0	0	
	Vol.	0	0	8,120	0	0	0	0	8,120
Cumberland	Fac.	0	0	2-L	0	0	1-L	0	
	Vol.	0	0	321,650	0	0	7,983	0	329,633
Currituck	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Dare	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Davidson	Fac.	2-L	0	0	0	0	1-L	0	
	Vol.	132,000	0	0	0	0	128,885	0	260,885
Davie	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	

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TABLE 1

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		22	27	28	33	34	35	36	
Duplin	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Durham	Fac.	0	2-S 1-L	1-S	0	3-L	0	1-L	
	Vol.	0	1,281	2,340	0	14,836	0	1,686	20,143
Edgecombe	Fac.	3-L	0	0	1-L	0	0	0	
	Vol.	24,235	0	0	86,500	0	0	0	110,735
Forsyth	Fac.	0	0	1-S	1-L	2-S 3-L	0	5-L	
	Vol.	0	0	12,500	61,198	375,125	0	76,450	525,273
Franklin	Fac.	1-L	1-S	0	0	0	2-S	0	
	Vol.	50	35	0	0	0	255	0	340
Gaston	Fac.	0	1-L	3-L	0	0	1-S 3-L	0	
	Vol.	0	361	167,434	0	0	6,520	0	174,315
Gates	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Graham	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Granville	Fac.	1-S 1-L	0	0	0	1-S	0	0	
	Vol.	10,853	0	0	0	10	0	0	10,863
Greene	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	

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Guilford	Fac.	1-S 2-L	6-S 10-L	1-S 5-L	1-S 1-L	6-S 9-L	8-S 6-L	2-S 2-L	
	Vol.	1,650	19,330	820,170	275	21,962	28,624	14,117	906,128
Halifax	Fac.	0	0	1-S	0	0	0	0	
	Vol.	0	0	2,000	0	0	0	0	2,000
Harnett	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Haywood	Fac.	0	1-S	0	0	0	0	0	
	Vol.	0	12	0	0	0	1-L	0	
Henderson	Fac.	0	0	0	1-S	0	16,444	0	16,456
	Vol.	0	0	0	24,000	0	1-S	0	
Hertford	Fac.	0	0	0	1-L	0	61,050	0	85,050
	Vol.	0	0	0	70,898	0	0	0	
Hoke	Fac.	1-L	0	0	0	0	0	0	70,898
	Vol.	7,200	0	0	0	0	0	0	
Hyde	Fac.	0	0	0	0	0	0	0	7,200
	Vol.	0	0	0	0	0	0	0	
Iredell	Fac.	1-L	0	0	0	0	0	0	
	Vol.	330	0	0	0	1-L	0	0	
Jackson	Fac.	0	1-S	0	0	100,240	0	0	100,570
	Vol.	0	200	0	0	0	0	0	200

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TABLE 1

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Johnston	Fac.	0	0	0	0	0	0	1-L	
	Vol.	0	0	0	0	0	0	140	140
Jones	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Lee	Fac.	1-L	0	1-L	1-L	2-L	1-L	1-L	
	Vol.	1,500	0	189,540	6,000	1,485	990	6,565	206,080
Lenoir	Fac.	0	0	2-L	0	0	0	0	
	Vol.	0	0	325,888	0	0	0	0	325,888
Lincoln	Fac.	1-S	0	0	0	1-L	0	0	
	Vol.	100	0	0	0	120	0	0	220
McDowell	Fac.	1-L	0	0	0	0	0	0	
	Vol.	50,500	0	0	0	0	0	0	50,500
Macon	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Madison	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Martin	Fac.	0	0	1-S	0	0	0	0	
	Vol.	0	0	50	0	0	0	0	50
Mecklenburg	Fac.	0	5-S 3-L	7-S 5-L	0	2-S 3-L	3-S 7-L	1-S 2-L	
	Vol.	0	9,823	1,016,011	0	7,673	19,720	1,690	917

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON ACTUAL SURVEY RESULTS

TABLE 1

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Mitchell	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Montgomery	Fac.	1-L	0	0	0	0	0	0	
	Vol.	3,000	0	0	0	0	0	0	
Moore	Fac.	1-L	0	0	0	0	0	0	3,000
	Vol.	2,250	0	0	0	0	0	1-L	
Nash	Fac.	0	0	1-S	0	2-L	0	41,600	43,850
	Vol.	0	0	19,200	0	28,900	0	0	
New Hanover	Fac.	0	1-L	1-S 2-L	0	0	1-L	1-L	48,100
	Vol.	0	2,212	5,551,727	0	0	3,425,886	4,000	8,983,825
Northampton	Fac.	0	0	1-S	0	0	0	0	
	Vol.	0	0	80,800	0	0	0	0	80,800
Onslow	Fac.	0	1-L	0	0	0	0	0	
	Vol.	0	224	0	0	0	0	0	224
Orange	Fac.	0	0	0	0	0	0	1-L	
	Vol.	0	0	0	0	0	0	9,000	9,000
Pamlico	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Pasquotank	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON ACTUAL SURVEY RESULTS

TABLE 1

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Pender	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Perquimans	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Person	Fac.	0	0	0	1-L	1-L	1-L	0	
	Vol.	0	0	0	13,500	19,716	186	0	33,402
Pitt	Fac.	1-L	0	1-S 1-L	0	0	1-S	1-L	
	Vol.	1,200	0	370,000	0	0	50	60	371,310
Polk	Fac.	1-L	1-S	0	0	0	0	0	
	Vol.	30,000	520	0	0	0	0	0	30,520
Randolph	Fac.	2-S 2-L	1-S 0	0	0	1-L	2-S	0	
	Vol.	2,100	81	0	0	300	150	0	2,631
Richmond	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Robeson	Fac.	1-L	0	0	0	0	1-L	0	
	Vol.	451,000	0	0	0	0	1,040	0	452,040
Rockingham	Fac.	6-L	0	0	1-S 1-L	1-L	0	0	
	Vol.	6,705	0	0	9,500	14,050	0	0	30,255
Rowan	Fac.	0	2-L	1-L	0	0	1-L	1-L	
	Vol.	0	67	6,300	0	0	500	400	7,267

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON ACTUAL SURVEY RESULTS

TABLE 1

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Rutherford	Fac.	0	1-S	0	0	0	0	0	
	Vol.	0	6	0	0	0	0	0	6
Sampson	Fac.	0	0	0	0	0	0	1-L	
	Vol.	0	0	0	0	0	0	1,050	1,050
Scotland	Fac.	0	0	0	1-L	1-L	0	1-L	
	Vol.	0	0	0	14,000	125,000	0	320	139,320
Stanly	Fac.	0	0	0	1-L	0	0	0	
	Vol.	0	0	0	7,091	0	0	0	7,091
Stokes	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Surry	Fac.	0	0	0	0	1-S	0	2-L	
	Vol.	0	0	0	0	123,018	0	19,725	142,743
Swain	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Transyl-vania	Fac.	0	0	1-L	0	0	0	0	
	Vol.	0	0	7,363,000	0	0	0	0	7,363,000
Tyrrell	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Union	Fac.	0	0	1-S 1-L	0	1-L	2-S 1-L	1-L	
	Vol.	0	0	61,920	0	28,545	4,630	3,850	98,945

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON ACTUAL SURVEY RESULTS

TABLE 1

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Vance	Fac.	0	0	0	0	0	2-S	0	
	Vol.	0	0	0	0	0	2,593	0	2,593
Wake	Fac.	1-L	2-L	1-S 1-L	0	4-S 2-L	3-L	1-S 6-L	
	Vol.	500	1,436	6,190	0	4,114	62,450	88,860	163,550
Warren	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Washington	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Watauga	Fac.	0	0	0	0	1-L	0	0	
	Vol.	0	0	0	0	6,150	0	0	6,150
Wayne	Fac.	0	1-L	0	0	0	0	1-L	
	Vol.	0	1,154	0	0	0	0	25	1,179
Wilkes	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Wilson	Fac.	0	0	0	0	0	3-L	0	
	Vol.	0	0	0	0	0	4,330	0	4,330
Yadkin	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	
Yancey	Fac.	0	1-S	0	0	0	0	0	
	Vol.	0	30	0	0	0	0	0	30
		788,183	56,215	16,589,087	293,862	884,994	3,788,754	453,822	22,854,917

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON STATISTICAL SURVEY WITH 95% CONFIDENCE

TABLE 2

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Alamance	Fac.	57-S 65-L	10-S 1-L	12-S	1-L	12-S 1-L	22-S 3-L	3-S 5-L	
	Vol.	632,469	1,797	90,684	9,180	32,917	202,362	43,080	1,012,489
Alexander	Fac.	3-S 3-L	1-S	0	1-S	0	1-S	1-L	
	Vol.	29,199	59	0	838	0	1,050	6,984	38,130
Alleghany	Fac.	1-L	0	0	0	0	0	0	
	Vol.	9,711	0	0	0	0	0	0	9,711
Anson	Fac.	1-S 11-L	4-S	1-S 1-L	0	1-S	1-L	0	
	Vol.	106,843	236	312,272	0	1,769	59,754	0	480,874
Ashe	Fac.	2-S 1-L	0	0	0	0	0	2-L	
	Vol.	9,755	0	0	0	0	0	13,968	23,723
Avery	Fac.	2-L	2-S	1-S	0	0	0	1-L	
	Vol.	19,422	118	7,557	0	0	0	6,984	34,081
Beaufort	Fac.	1-L	2-S	1-S 1-L	0	2-S 1-L	1-S 1-L	1-L	
	Vol.	9,711	118	312,272	0	15,227	60,804	6,984	405,116
Bertie	Fac.	0	0	0	1-S	2-S	1-S 2-L	0	
	Vol.	0	0	0	838	3,538	120,558	0	124,934
Bladen	Fac.	2-S 4-L	2-S	1-S	0	2-S	1-S	0	
	Vol.	38,888	118	7,557	0	3,538	1,050	0	51,151
Brunswick	Fac.	0	2-S	2-S 7-L	1-S	0	0	0	
	Vol.	0	118	2,148,119	838	0	0	0	2,149,075

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON STATISTICAL SURVEY WITH 95% CONFIDENCE

TABLE 2

COUNTY		MAJOR GROUP .. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Buncombe	Fac.	10-S 19-L	14-S 2-L	6-S 1-L	8-S	18-S 9-L	21-S 7-L	3-S 14-L	
	Vol.	184,729	3,240	350,057	6,704	137,043	440,328	105,936	1,228,037
Burke	Fac.	11-S 29-L	2-S 2-L	6-S 1-L	0	4-S	6-S	1-S 3-L	
	Vol.	281,861	2,532	350,057	0	7,076	6,300	23,672	671,498
Cabarrus	Fac.	7-S 29-L	1-S 1-L	2-S	0	2-S 1-L	2-S	0	
	Vol.	281,773	1,266	15,114	0	15,227	2,100	0	315,480
Caldwell	Fac.	5-S 16-L	4-S	3-S 2-L	0	1-S	3-S	0	
	Vol.	155,486	236	632,101	0	1,769	3,150	0	792,742
Camden	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	0
Carteret	Fac.	0	2-S	0	0	1-L	1-S	0	
	Vol.	0	118	0	0	11,689	1,050	0	12,857
Caswell	Fac.	4-L	2-S	0	0	0	0	0	
	Vol.	38,844	118	0	0	0	0	0	38,962
Catawba	Fac.	90-S 55-L	8-S 6-L	9-S	1-L	20-S 3-L	21-S 2-L	1-S 1-L	
	Vol.	536,085	7,714	68,013	9,180	70,447	141,558	9,704	842,701
Chatham	Fac.	1-S 7-L	1-S	2-S 1-I	0	0	2-S	1-S	
	Vol.	67,999	59	319,829	0	0	2,100	2,720	392,707
Cherokee	Fac.	2-L	2-S	0	0	0	0	1-L	
	Vol.	19,422	118	0	0	0	0	6,984	26,524

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON STATISTICAL SURVEY WITH 95% CONFIDENCE

TABLE 2

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Chowan	Fac.	3-L	2-S	2-S	0	1-S	2-S	1-S	50,954
	Vol.	29,133	118	15,114	0	1,769	2,100	2,720	
Clay	Fac.	0	0	0	1-L	1-S	2-S	2-L	27,017
	Vol.	0	0	0	9,180	1,769	2,100	13,968	
Cleveland	Fac.	15-S 36-L	6-S	1-L	2-S	4-S 1-L	6-S 1-L	1-S 1-L	751,194
	Vol.	349,926	354	304,715	1,676	18,765	66,054	9,704	
Columbus	Fac.	3-L	4-S	5-S 4-L	0	3-S 2-L	2-S	1-S	1,319,519
	Vol.	29,133	236	1,256,645	0	28,685	2,100	2,720	
Craven	Fac.	1-L	4-S	1-S 2-L	0	4-S 2-L	2-S 1-L	0	719,242
	Vol.	9,711	236	616,987	0	30,454	61,854	0	
Cumberland	Fac.	8-L	6-S 1-L	3-S 5-L	0	3-S 2-L	2-S 5-L	2-L	1,969,018
	Vol.	77,688	1,561	1,546,246	0	28,685	300,870	13,968	
Currituck	Fac.	0	0	1-S	0	0	0	0	7,557
	Vol.	0	0	7,557	0	0	0	0	
Dare	Fac.	0	2-S	0	0	0	0	0	118
	Vol.	0	118	0	0	0	0	0	
Davidson	Fac.	7-S 18-L	8-S	1-S	0	3-S 4-L	6-S 1-L	3-S 1-L	316,242
	Vol.	174,952	472	7,557	0	52,063	66,054	15,144	
Davie	Fac.	2-L	1-S	0	0	1-S	1-L	0	81,004
	Vol.	19,422	59	0	0	1,769	59,754	0	

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON STATISTICAL SURVEY WITH 95% CONFIDENCE

TABLE 2

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Duplin	Fac.	1-S 6-L	2-S	1-S	0	0	1-S	0	67,013
	Vol.	58,288	118	7,557	0	0	1,050	0	
Durham	Fac.	1-S 2-L	18-S 6-L	2-S	0	8-S 7-L	9-S 5-L	4-S 3-L	478,889
	Vol.	19,444	8,304	15,114	0	95,975	308,220	31,832	
Edgecombe	Fac.	12-L	3-S	1-S 1-L	1-L	4-S	1-S 2-L	1-L	572,779
	Vol.	116,532	177	312,272	9,180	7,076	120,558	6,984	
Forsyth	Fac.	2-S 16-L	31-S 5-L	7-S 1-L	3-S 5-L	34-S 16-L	20-S 12-L	3-S 8-L	1,618,562
	Vol.	155,420	7,864	357,614	48,414	247,170	738,048	64,032	
Franklin	Fac.	1-S 3-L	2-S	1-S	0	2-S	2-S	0	42,468
	Vol.	29,155	118	7,557	0	3,538	2,100	0	
Gaston	Fac.	24-S 104-L	26-S 3-L	4-S 5-L	8-S	30-S 9-L	105-S 26-L	2-L	4,412,227
	Vol.	1,010,472	5,155	1,553,803	6,704	158,271	1,663,854	13,968	
Gates	Fac.	0	0	0	0	0	0	0	0
	Vol.	0	0	0	0	0	0	0	
Graham	Fac.	0	0	0	0	0	0	1-L	6,984
	Vol.	0	0	0	0	0	0	2-L	
Granville	Fac.	2-S 9-L	2-S	0	0	1-S	1-S		104,348
	Vol.	87,443	118	0	0	1,769	1,050	13,968	
Greene	Fac.	2-S	0	2-S	0	2-S	0	0	18,696
	Vol.	44	0	15,114	0	3,538	0	0	

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON STATISTICAL SURVEY WITH 95% CONFIDENCE

TABLE 2

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Guilford	Fac.	21-S 48-L	61-S 13-L	30-S 16-L	13-S 6-L	72-S 37-L	59-S 19-L	10-S 7-L	
	Vol.	466,590	19,290	5,102,150	65,974	559,861	1,197,276	76,088	7,487,229
Halifax	Fac.	7-L	4-S	6-S	0	1-S 1-L	3-S	1-S	
	Vol.	67,977	336	45,342	0	13,458	3,150	2,720	132,983
Harnett	Fac.	3-L	4-S	1-S	0	1-S	7-S 1-L	2-L	
	Vol.	29,133	236	7,557	0	1,769	67,104	13,968	119,767
Haywood	Fac.	1-S	2-S	2-S 2-L	0	0	1-S 1-L	1-S	
	Vol.	22	118	624,544	0	0	60,804	2,720	688,208
Henderson	Fac.	2-S 8-L	6-S	2-S	1-S	2-S	5-S	1-S 1-L	
	Vol.	77,732	354	15,114	838	3,538	5,250	9,704	112,530
Hertford	Fac.	1-L	1-S 2-L	1-L	1-L	1-S	4-S 1-L	0	
	Vol.	9,711	2,473	304,715	9,180	1,769	63,954	0	391,802
Hoke	Fac.	5-L	1-S	1-S	0	0	0	0	
	Vol.	48,555	59	7,557	0	0	0	0	56,171
Hyde	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	0
Iredell	Fac.	7-S 17-L	4-S	3-S	3-S	11-S 1-L	9-S 7-L	1-L	
	Vol.	165,241	236	22,671	2,514	31,148	427,728	6,984	656,522
Jackson	Fac.	0	2-S	0	0	0	0	0	
	Vol.	0	118	0	0	0	0	0	118

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON STATISTICAL SURVEY WITH 95% CONFIDENCE

TABLE 2

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Johnston	Fac.	1-S 4-L	7-S	1-S 3-L	0	1-S	1-S	1-S 5-L	
	Vol.	38,866	413	921,702	0	1,769	1,050	37,640	1,001,440
Jones	Fac.	0	0	0	0	0	0	0	
	Vol.	0	0	0	0	0	0	0	0
Lee	Fac.	3-S 6-L	2-S	1-S 1-L	2-L	4-L	3-S 8-L	4-L	
	Vol.	58,332	118	312,272	18,360	46,756	481,182	27,936	944,956
Lenoir	Fac.	1-S 5-L	1-S 1-L	1-S 3-L	1-L	1-S 1-L	2-S 2-L	4-L	
	Vol.	48,577	1,266	921,702	9,180	13,458	121,608	27,936	1,143,727
Lincoln	Fac.	8-S 20-L	1-S	0	0	1-L	1-S 3-L	0	
	Vol.	194,396	59	0	0	11,689	180,312	0	386,456
McDowell	Fac.	8-S 10-L	2-S	1-L	0	2-L	2-S 1-L	0	
	Vol.	97,286	118	304,715	0	23,378	61,854	0	487,351
Macon	Fac.	0	1-S	0	1-S	0	0	1-L	
	Vol.	0	59	0	838	0	0	6,984	7,881
Madison	Fac.	0	2-S	0	0	0	0	1-S 1-L	
	Vol.	0	118	0	0	0	0	9,704	9,822
Martin	Fac.	3-L	2-S	2-S 1-L	0	0	0	0	
	Vol.	29,133	118	319,829	0	0	0	0	349,080
Mecklenburg	Fac.	21-S 27-L	72-S 11-L	41-S 23-L	8-S 10-L	62-S 24-L	77-S 31-L	13-S 6-L	
	Vol.	262,659	17,525	7,318,282	98,504	390,214	1,933,224	77,264	10,097,672

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON STATISTICAL SURVEY WITH 95% CONFIDENCE

TABLE 2

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Mitchell	Fac.	2-S 3-L	2.5	1-S	0	0	0	0	
	Vol.	29,177	118	7,557	0	0	0	0	36,852
Montgomery	Fac.	3-S 11-L	3.5	0	2-L	0	4-S	0	
	Vol.	106,887	177	0	18,360	0	4,200	0	129,624
Moore	Fac.	2-S 8-L	12-S	2-S	1-L	1-L	1-L	1-L	
	Vol.	77,732	708	15,114	9,180	11,689	59,754	6,984	181,161
Nash	Fac.	1-S 8-L	6-S 1-L	2-S 2-L	0	3-S 4-L	4-S 1-L	1-S	
	Vol.	77,710	1,561	624,544	0	52,063	63,954	2,720	822,552
New Hanover	Fac.	3-L	9-S 1-L	10-S 2-L	1-L	8-S 3-L	5-S 2-L	1-S 3-L	
	Vol.	29,133	1,738	685,000	9,180	49,219	124,758	23,672	922,700
Northampton	Fac.	0	0	4-S	0	1-S	1-L	0	
	Vol.	0	0	30,228	0	1,769	59,754	0	91,751
Onslow	Fac.	0	1-S 1-L	0	0	0	0	0	
	Vol.	0	1,266	0	0	0	0	0	1,266
Orange	Fac.	1-S 6-L	4-S 2-L	0	0	0	1-S	1-L	
	Vol.	58,288	2,650	0	0	0	1,050	6,984	68,972
Pamlico	Fac.		1-S	0	0	0	0	0	
	Vol.	0	59	0	0	0	0	0	59
Pasquotank	Fac.	2-L	1-S 2-L	1-S	1-L	1-S	2-S 2-L	0	
	Vol.	19,422	2,473	7,557	9,180	1,769	121,608	0	162,009

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON STATISTICAL SURVEY WITH 95% CONFIDENCE

TABLE 2

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Pender	Fac.	1-L	1-S	0	0	0	0	1-L	
	Vol.	9,711	59	0	0	0	0	6,984	16,754
Perquimans	Fac.	0	0	1-S	0	0	0	0	
	Vol.	0	0	7,557	0	0	0	0	7,557
Person	Fac.	1-S 3-L	2-S	1-S 1-L	1-L	5-L	2-S 2-L	2-S	
	Vol.	29,155	118	312,272	9,180	58,445	121,608	5,440	536,218
Pitt	Fac.	4-S 3-L	8-S 1-L	5-S 1-L	0	3-S 2-L	4-S 3-L	1-L	
	Vol.	29,221	1,679	342,500	0	28,685	183,462	6,984	592,531
Polk	Fac.	5-S 7-L	1-S	0	0	0	0	0	
	Vol.	68,087	59	0	0	0	0	0	68,146
Randolph	Fac.	18-S 33-L	8-S	1-S	1-L	1-S 2-L	8-S 3-L	2-L	
	Vol.	320,859	472	7,557	9,180	25,147	187,662	13,968	564,845
Richmond	Fac.	1-S 9-L	3-S	1-S 1-L	1-S	1-S 2-L	1-S 1-L	0	
	Vol.	87,421	177	312,272	838	25,147	60,804	0	486,659
Robeson	Fac.	5-S 16-L	5-S	2-S 1-L	0	2-S 2-L	4-S 1-L	4-L	
	Vol.	155,486	295	319,829	0	26,916	63,954	27,936	594,416
Rockingham	Fac.	6-S 22-L	2-S 1-L	0	1-S 1-L	2-S 3-L	0	1-S 1-L	
	Vol.	213,774	1,325	0	10,018	38,605	0	9,704	273,426
Rowan	Fac.	1-S 15-L	2-S 3-L	3-S 5-L	1-L	6-S 4-L	5-S 7-L	1-L	
	Vol.	145,687	3,739	1,546,246	9,180	57,370	423,528	6,984	2,192,734

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON STATISTICAL SURVEY WITH 95% CONFIDENCE

TABLE 2

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Rutherford	Fac.	25-L	4-S	1-L	0	0	0	0	547,726
	Vol.	242,775	236	304,715	0	0	0	0	
Sampson	Fac.	2-L	3-S	1-S	0	2-S 1-L	2-S 1-L	1-L	111,221
	Vol.	19,422	177	7,557	0	15,227	61,854	6,984	
Scotland	Fac.	5-L	2-S	1-S 1-L	1-L	1-S 2-L	4-S	2-L	413,440
	Vol.	48,555	118	312,272	9,180	25,147	4,200	13,968	
Stanly	Fac.	2-S 13-L	4-S	2-S	1-L	2-S	2-S	1-L	163,439
	Vol.	126,287	236	15,114	9,180	3,538	2,100	6,984	
Stokes	Fac.	1-S 1-L	1-S	0	0	0	0	0	9,792
	Vol.	9,733	59	0	0	0	0	0	
Surry	Fac.	5-S 17-L	4-S	1-L	0	2-S 1-L	3-S	4-L	516,461
	Vol.	165,197	236	304,715	0	15,227	3,150	27,936	
Swain	Fac.	1-S	1-S	0	0	2-S	0	0	3,619
	Vol.	22	59	0	0	3,538	0	0	
Transyl-vania	Fac.	1-L	0	1-L	0	2-S 3-L	1-S 2-L	0	473,589
	Vol.	9,711	0	304,715	0	38,605	120,558	0	
Tyrrell	Fac.	0	0	0	0	0	0	0	0
	Vol.	0	0	0	0	0	0	0	
Union	Fac.	2-S 10-L	2-S	2-S 1-L	3-S	3-S 4-L	10-S 3-L	2-S 1-L	673,864
	Vol.	97,154	118	319,829	2,514	52,063	189,762	12,424	

SUMMARY OF HAZARDOUS OR DIFFICULT TO HANDLE WASTE
NUMBER OF FACILITIES & VOLUME (GALLONS) OF WASTE,
VOLUME BASED ON STATISTICAL SURVEY WITH 95% CONFIDENCE

TABLE 2

COUNTY		MAJOR GROUP S. I. C. (STANDARD INDUSTRIAL CLASSIFICATION)							TOTAL BY COUNTY
		22	27	28	33	34	35	36	
Vance	Fac.	2-S 13-L	1-S	0	0	1-S	1-S 1-L	1-S	
	Vol.	126,287	59	0	0	1,769	60,804	2,720	191,63
Wake	Fac.	1-S 10-L	45-S 8-L	5-S 4-L	1-S	20-S 9-L	13-S 12-L	7-S 18-L	
	Vol.	97,132	12,311	1,256,645	838	140,581	730,698	144,752	2,382,95
Warren	Fac.	2-L	2-S	2-S	0	0	0	0	
	Vol.	19,422	118	15,114	0	0	0	0	34,65
Washington	Fac.	0	2-S	2-S	0	0	1-S	0	
	Vol.	0	118	15,114	0	0	1,050	0	16,28
Watauga	Fac.	0	1-S	0	0	2-S 1-L	0	1-L	
	Vol.	0	59	0	0	15,227	0	6,984	22,27
Wayne	Fac.	4-L	5-S 1-L	0	1-L	4-S 1-L	1-S	1-S 1-L	
	Vol.	38,844	1,502	0	9,180	18,765	1,050	9,704	79,04
Wilkes	Fac.	5-S 3-L	2-S	0	0	2-S	6-S 2-L	0	
	Vol.	29,243	118	0	0	3,538	125,808	0	158,707
Wilson	Fac.	1-S 2-L	8-S 2-L	4-S 4-L	1-S 1-L	2-S	4-S 3-L	0	
	Vol.	19,444	2,886	1,249,088	10,018	3,538	183,462	0	1,468,43
Yadkin	Fac.	2-L	2-S	0	0	0	3-S	0	
	Vol.	19,422	118	0	0	0	3,150	0	22,690
Yancey	Fac.	3-L	2-S	0	0	1-L	0	0	
	Vol.	29,133	118	0	0	11,689	0	0	40,940
		8,738,703	123,306	35,188,747	433,326	2,805,619	12,006,168	1,073,472	60,369,341

S. I. C. 22
Textile Mill Products

This major group (two digits) is divided into the following sub-groups (three and four digits): 2211, Weaving Mills Cotton; 2221, Weaving Mills Synthetics; 2231, Weaving and Finishing Mills Wool; 225, Knitting Mills; 2251, Women's Hosiery Except Socks; 2252, Hosiery NEC (Not Elsewhere Classified); 2253, Knit Outerwear Mills; 2254, Knit Underwear Mills; 2256, Knit Fabric Mills; 2259, Knitting Mills NEC (Not Elsewhere Classified); 2262, Finishing Plants Synthetics; 2269, Finishing Plants NEC; 2271, Woven Carpets and Rugs; 2272, Tufted Carpets and Rugs; 2279, Carpets and Rugs NEC; 2281, Yarn Mills Except Wool; 2282, Throwing and Winding Mills; 2283, Wool Yarn Mills; 2284, Thread Mills; 229, Miscellaneous Textile Goods; 2291, Felt Goods NEC; 2292, Lace Goods; 2293, Paddings and Upholstery Filling; 2294, Processed Textile Waste; 2295, Coated Fabrics Not Rubberized; 2296, Tire Cord and Fabric; 2298, Cordage and Twine; 2299, Textile Goods NEC.

Survey Results: S.I.C. 22

This major group represents a large percentage of manufacturing in North Carolina (approximately 19 percent). It is the largest S.I.C. Code in the number of facilities listed. It includes 387 small facilities (49 or less employees) and 899 large facilities (50 or more employees) for a total of 1,286 manufacturing facilities. There were 72 small facilities surveyed (18.6%) with seven facilities or 9.7 percent generating 1,585 gallons of waste in 1976. There were 81 large facilities surveyed (9%) with 32 facilities or 39.5 percent of those surveyed generating 786,598 gallons of waste in 1976.

The statistical survey with a 95 percent confidence indicated that the 387 small facilities generated 8,514 gallons of waste in 1976, with the 899 large facilities generating 8,730,189 gallons or a total of 8,738,703 gallons for this industrial group in 1976.

Survey results from the small facilities in the textile industry showed only

waste lubricating oil and solvents as the general categories of wastes being generated within the state. It was found during the survey that there is not nearly so much variety of operations in the small textile industry as in the large. There is very little dyeing, for instance; there is mainly yarnmaking and weaving of small items such as socks, stockings, and pantyhose. The few small dyeing operations usually have their effluents go directly to town or city sewage disposal plants where they are located since their quantities are relatively small. This is in contrast to many of the large textile mills which have their own waste treatment facilities.

The wastes from the large facilities within this industry group consisted largely of sanitary and dyehouse waste treatment sludge (82.8%). The other main wastes were varsol type solvents, oils, latex sludge, acrylic foam, various resins and starch. Quantities of other wastes involved were relatively small.

The data on Map No. 1 indicates the area of the state where the wastes in S.I.C. 22 were generated (from actual survey results).

Table No. 3

SIC-22 Small
TEXTILES - RESULTS FROM SURVEY

Breakdown of various types of wastes in textile industry.
Total Gallons - 1,585

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Waste lubricating oil	1,550	97.8%
Waste Solvent	35	2.2%
	TOTAL 1,585	

Table No. 4

SIC-22 LARGE
TEXTILES - RESULTS FROM SURVEY

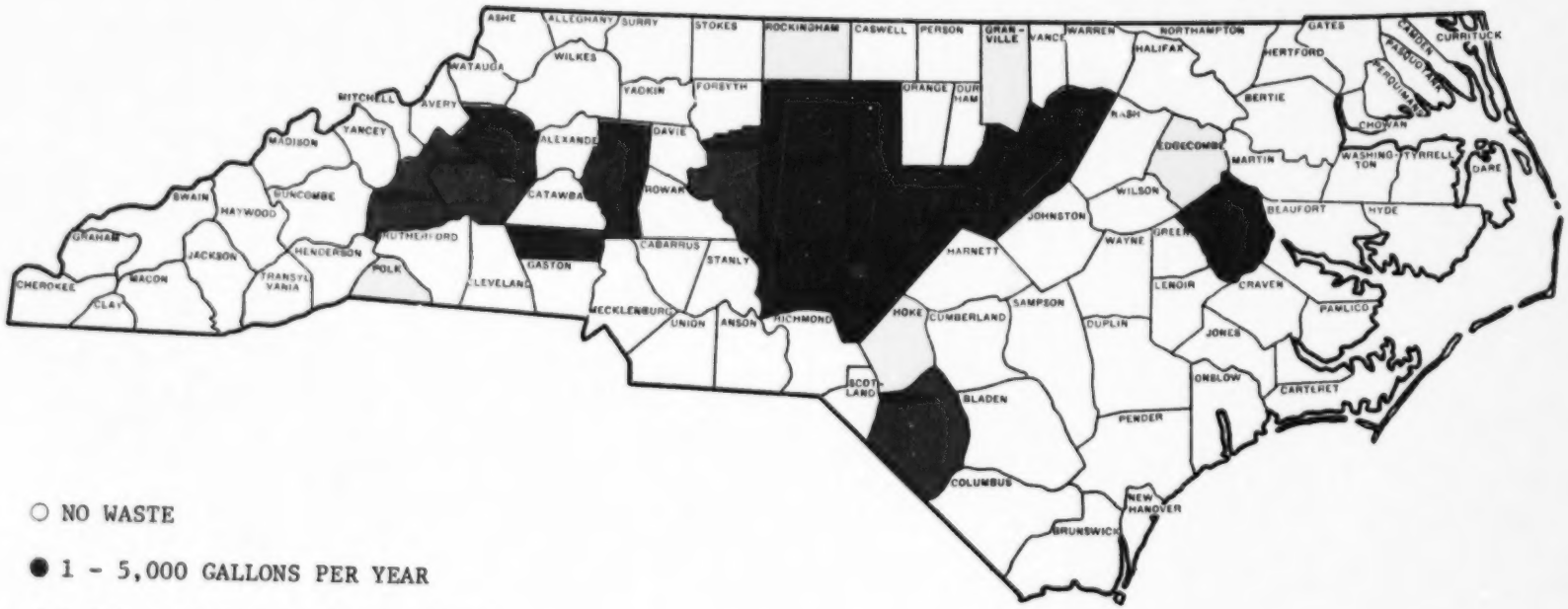
Breakdown of various types of wastes in the textile industry.
Total Gallons - 786,598

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Sanitary and dyehouse waste treatment sludge	651,700	82.8%
Varsol type solvents	59,270	7.5%
Lubricating and hydraulic oils	31,995	4.0%
Latex sludge	16,775	2.1%
Acrylic foam	10,843	1.3%
Glyoxal resin	6,500	0.8%
Starch	5,000	0.6%
Concentrated dye sludge	2,250	0.3%
Paraffin and oil sludge	600	0.07%
Resin sludge	330	0.04%
Chlorinated hydrocarbon solvents	100	0.01%
TOTAL	786,598	

NORTH CAROLINA

SIC-22
TEXTILES

Actual Survey Results



○ NO WASTE

● 1 - 5,000 GALLONS PER YEAR

○ 5,001 - 50,000 GALLONS PER YEAR

◉ 50,001 - 500,000 GALLONS PER YEAR

S. I. C. 27
Printing and Publishing

This major group (two digits) is divided into the following sub-groups (three and four digits): 271, Newspapers Publishing, Publishing, and Printing; 2711, Newspapers; 2721, Periodicals; 2731, Book Publishing; 2741, Miscellaneous Publishing; 275, Commercial Printing; 2751, Commercial Printing Except Lithographic; 2752, Commercial Printing Lithographic; 2753, Engraving and Plate Printing; 2761, Manifold Business Forms; 2771, Greeting Card Publishing; 2789, Bookbinding and Related Work; 2791, Typesetting; 2793, Photoengraving; 2794, Electrotyping and Stereotyping.

Survey Results: S.I.C. 27

There was a total of 590 facilities in this industry group, divided into 513 small and 77 large. A total of 73 small facilities (14.2%) was surveyed with 23 or 31.5 percent generating 4,299 gallons of waste in 1976. Forty-three (43) large facilities (58.9%) were surveyed with 29 or 67.4 percent generating 51,916 gallons of waste in 1976.

The statistical survey with a 95 percent confidence indicated that the 513 small facilities within this code in North Carolina generated a total of 30,367 gallons of waste in 1976. Similarly, the statistics show that the 77 large facilities generated a total of 92,939 gallons of waste. The small and the large facilities together generated a total of 123,306 gallons.

Survey results from the small facilities in the printing industry showed that the main wastes found were varsol type solvents, ink, and ink residues, photo chemicals, film, and silver metal sludge; solvent amounted to over half of the volume of wastes found here.

The wastes from the large facilities within this industry group consisted of mainly alcohol type solvents, ink and ink residues, varsol type solvents, chlorinated hydrocarbon solvents, spray booth sludge, photochemical solutions and various

sludges. Alcohol type solvents amounted to over half of the volume of wastes with varsol type solvents amounting to another 7.8 percent.

The data on Map No. 2 indicates the area of the state where the various wastes in S.I.C. 27 were generated (from actual survey results).

Table No. 5

SIC-27 SMALL
PRINTING
BREAKDOWN OF VARIOUS TYPES OF WASTES

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Varsol type solvent	2,277	52.9%
Ink and ink residues	1,066	24.7%
Photo chemicals	764	17.7%
Photo chemicals containing silver	117	2.7%
Film containing silver	72	1.6%
Silver metal sludge	3	.07%
	TOTAL 4,299	

Table No. 6

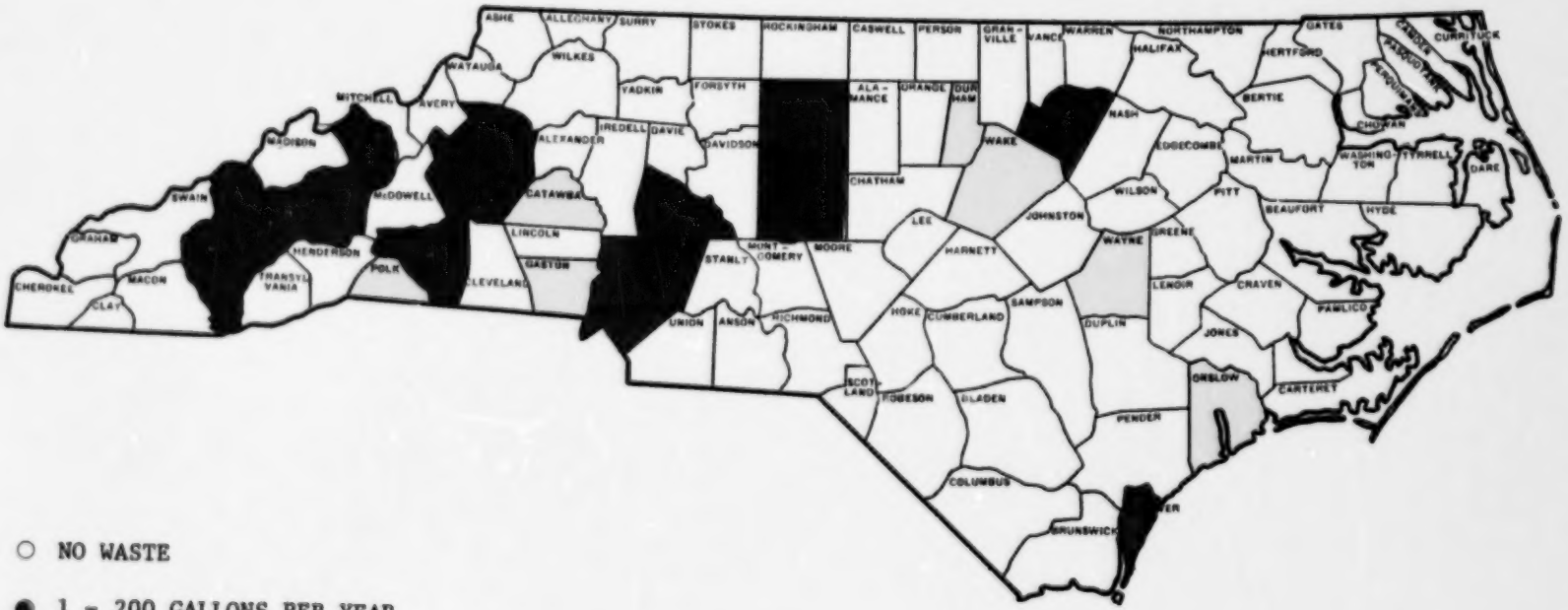
SIC-27 LARGE
PRINTING
BREAKDOWN OF VARIOUS TYPES OF WASTES

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Alcohol type solvents	28,000	53.9%
Ink and ink residues	10,397	20.0%
Varsol type solvents	4,088	7.8%
Chlorinated hydrocarbon solvents	3,300	6.2%
Paint spray booth sludge	2,409	4.6%
Photo chemical solutions	1,152	2.2%
Photo solutions containing silver	1,030	2.0%
Lead and type metal residues	819	1.6%
Lubricating and hydraulic oil	430	0.8%
Film containing silver	170	0.3%
Phosphatizing sludge	100	0.2%
Silver metal sludge	21	0.04%
TOTAL	51,916	

NORTH CAROLINA

SIC-27
PRINTING AND PUBLISHING

Actual Survey Results



○ NO WASTE

● 1 - 200 GALLONS PER YEAR

○ 201 - 2,000 GALLONS PER YEAR

● 2,001 - 20,000 GALLONS PER YEAR

S. I. C. 28
Chemical and Allied Products

This major group (two digits) is divided into the following sub-groups (four digits): 2812, Alkalies and Chlorine; 2813, Industrial Gases; 2815, Cyclic Intermediates and Crudes; 2816, Inorganic Pigments; 2818, Industrial Organic Chemicals NEC; 2819, Industrial Inorganic Chemicals NEC; 2821, Plastics Materials and Resins; 2822, Synthetic Rubber; 2824, Organic Fibers Noncellulosic; 2831, Biological Products; 2833, Medicinals and Botanicals; 2834, Pharmaceutical Preparations; 2841, Soap and Other Detergents; 2842, Polishes and Sanitation Goods; 2843, Surface Active Agents; 2844,Toilet Preparations; 2851, Paints and Allied Products; 2861, Gum and Wood Chemicals; 2871, Fertilizers; 2872, Fertilizers Mixing Only; 2879, Agricultural Chemicals NEC; 2891, Adhesives and Gelatin; 2892, Explosives; 2893, Printing Ink; 2899, Chemical Preparations NEC.

Survey Results: S.I.C. 28

There was a total of 331 facilities divided into small (49 or less employees) with 221 facilities and large (50 or more employees) with 110 facilities. A total of 68 small facilities was surveyed with 35.3 percent or 24 facilities generating 573,871 gallons of waste in 1976. Fifty-three large facilities were surveyed with 52.8 percent or 28 facilities generating 16,149,900 gallons in 1976.

The statistical survey with a 95 percent confidence indicated that the 221 small facilities in North Carolina generated 1,670,097 gallons of waste in 1976, with the 110 large facilities generating 33,518,650 gallons or a total of 35,188,747 gallons in 1976.

There was much more waste found in the chemical industry surveyed than was found in the facilities of any of the other S.I.C. Codes. There was also much more variety in the various types of wastes encountered than in any of the other S.I.C. Codes.

The chemical industry facilities surveyed included just about all the types

of wastes found in all the other S.I.C. Code facilities except for a few things like metal plating and finishing sludges containing heavy metal residues. Also, there were no silver sludges or residues encountered in the chemical facilities surveyed such as were found in the printing industry. (Silver is also a heavy metal.)

The data on Map No. 3 indicates the area of the state where the wastes in S.I.C. 28 were generated (from actual survey results).

Table No. 7

SIC-28 SMALL
CHEMICAL AND ALLIED PRODUCTS
BREAKDOWN OF VARIOUS TYPES OF WASTES

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Fertilizer liquids	120,000	23.3%
Adhesive sludge	80,800	15.7%
Automotive chemicals	49,920	9.7%
Textile chemical sludge	40,400	7.8%
Biological waste treatment sludge	38,896	7.5%
Inorganic salt solutions	38,450	7.5%
Alcohol and resin solids	29,040	5.6%
Starch and solvent	25,443	4.9%
Paint sludge	20,110	3.9%
Sodium aluminate	20,000	3.9%
Arsenic compounds	17,600	3.4%
Dyestuff residues	14,117	2.7%
Paint thinners and solvents	12,980	2.5%
Detergents	3,060	0.6%
Solid inorganic wastes	1,800	0.35%
Petroleum distillates and sludges	1,041	0.2%
Graphite	720	0.14%
Mercury waste	10	0.001%
TOTAL	513,887	

Table No. 8

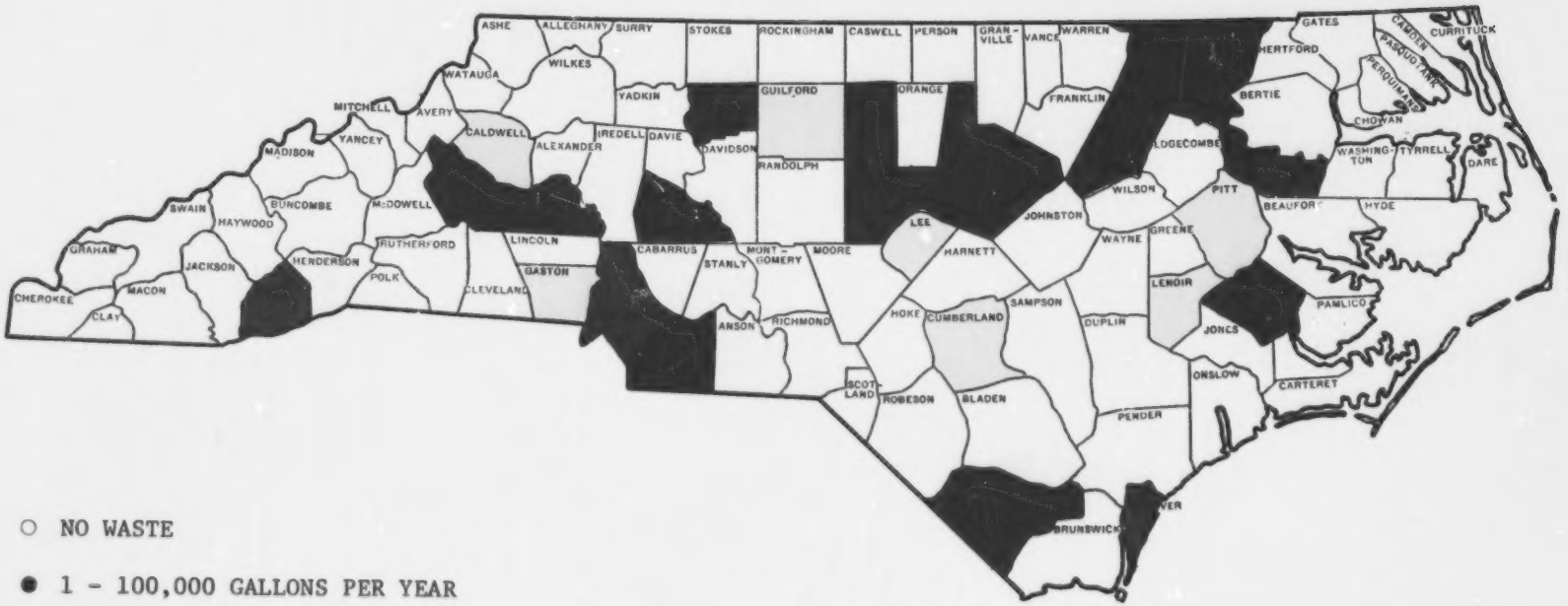
SIC-28 LARGE
CHEMICAL AND ALLIED PRODUCTS
BREAKDOWN OF VARIOUS TYPES OF WASTE

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Fiber resins and residues	8,265,486	51.1%
Mixed chemical sludges	4,898,297	30.3%
Lacquer thinners and solvents	1,114,092	6.9%
Acids	752,336	4.6%
Miscellaneous organic liquids	297,303	1.8%
Antimony trioxide and polyethylene terephthalate	185,810	1.1%
Yarn lubricant	184,800	1.1%
Textile dye residues	162,137	1.0%
Sanitary sludge	100,000	0.62%
Petroleum distillates	66,430	0.41%
Lubricating and hydraulic oils	47,332	0.29%
Caustic solutions	33,115	0.20%
Chlorinated hydrocarbon solvents	12,036	0.07%
Paint and lacquer sludge	10,039	0.06%
Graphite and carbon (contaminated)	8,403	0.05%
Insecticide manufacturing sludges	4,212	0.02%
Titanium dioxide	4,015	0.02%
Hydrated lime	2,881	0.02%
Ink, ink resin	600	0.003%
Asbestos	576	0.003%
TOTAL	16,149,900	

NORTH CAROLINA

SIC-28
CHEMICAL AND ALLIED PRODUCTS

Actual Survey Results



○ NO WASTE

● 1 - 100,000 GALLONS PER YEAR

○ 100,001 - 1,000,000 GALLONS PER YEAR

● 1,000,001 - 10,000,000 GALLONS PER YEAR

S. I. C. 33
Primary Metal Industries

This major group (two digits) is divided into the following sub-groups (three and four digits): 3312, Blast Furnaces and Steel Mills; 3315, Steel Wire and Related Products; 3316, Cold Finishing of Steel Shapes; 332, Iron and Steel Foundries; 3321, Gray Iron Foundries; 3322, Malleable Iron Foundries; 3323, Steel Foundries; 333, Primary Smelting & Refining of Non-ferrous Metals; 3332, Primary Lead; 3334, Primary Aluminum; 3341, Secondary Non-ferrous Metals; 3352, Aluminum Rolling and Drawing; 3356, Non-ferrous Rolling and Drawing NEC; 3357, Non-ferrous Wiredrawing and Insulating; 3361, Aluminum Castings; 3362, Brass, Bronze, and Copper Castings; 3369, Non-ferrous Castings NEC; 3399, Primary Metal Products NEC.

Survey Results: S.I.C. 33

There was a total of 99 facilities in this industry group divided into 57 small and 42 large. A total of 33 small facilities (57.9%) was surveyed with 5 or 15. 1 percent generating 27,650 gallons of waste in 1976. Twenty-nine (29) large facilities (69%) were surveyed with 10 or 34.5 percent generating 266,212 gallons of waste in 1976.

The statistical survey with a 95 percent confidence indicated that the 57 small facilities within this code in North Carolina generated a total of 47,766 gallons of waste in 1976. Similarly, the statistics show that the 42 large facilities generated a total of 385,560 gallons of waste in 1976. The total for the two sizes of facilities was 433,326 gallons.

There was little variety in types of wastes found in the small facilities; however, the large facilities showed several types of wastes. The main ones were water soluble oil, oil filter sludge, metal sludges, ink solvents, caustic soda, asbestos and silica; others were minor. The water soluble oil and various other oils and oil sludges amounted to about 72 percent of the total quantity of wastes found in this industry group.

The data on Map No. 4 indicates the area of the state where the wastes in S.I.C. 33 were generated (from actual survey results).

Table No. 9

SIC-33 SMALL
PRIMARY METAL INDUSTRIES
BREAKDOWN OF VARIOUS TYPES OF WASTES

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Nitric acid	24,000	86.8%
Lubricating and heat treating oil	3,250	11.7%
Lubricant - drawing compound	400	1.4%
TOTAL	27,650	

Table No. 10

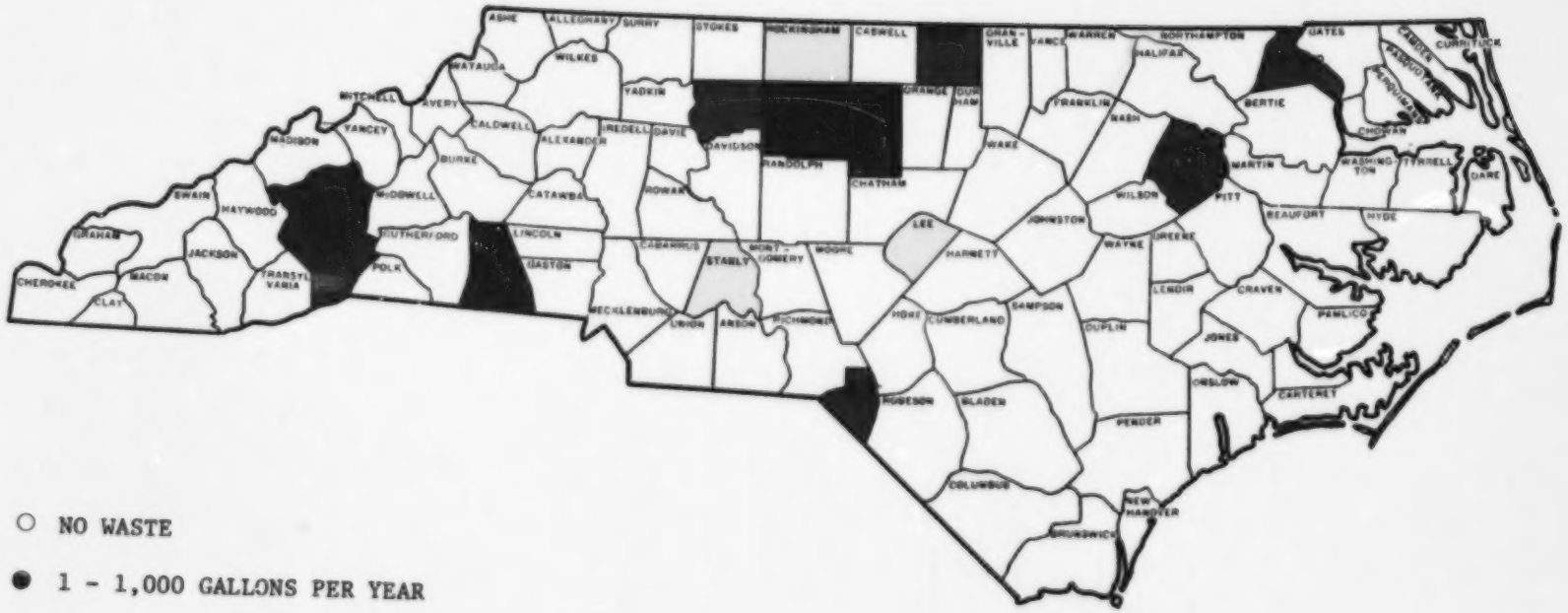
SIC-33 LARGE
PRIMARY METAL INDUSTRIES
BREAKDOWN OF VARIOUS TYPES OF WASTES

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Water soluble oil	132,500	53.9%
Oil filter sludge	40,716	16.5%
Aluminum sludge	14,500	5.9%
Copper sludge	14,000	5.6%
Ink solvents	10,843	4.4%
Caustic soda	9,898	4.0%
Asbestos and sili[illegible]	9,639	3.9%
Air cleaner and cooling tower sludge	7,851	3.1%
Lubricating, other oils	5,765	2.3%
	245,712	

NORTH CAROLINA

SIC-33
PRIMARY METAL INDUSTRIES

Actual Survey Results



○ NO WASTE

● 1 - 1,000 GALLONS PER YEAR

○ 1,001 - 10,000 GALLONS PER YEAR

● 10,001 - 1,000,000 GALLONS PER YEAR

S. I. C. 34
Fabricated Metal Products

This major group (two digits) is divided into the following sub-groups (three and four digits): 3411 Metal Cans; 342 Cutlery, Hand Tools & General Hardware; 3421 Cutlery; 3423 Hand and Edge Tools NEC (Not Elsewhere Classified); 3425 Handsaws and Saw Blades; 3429 Hardware NEC; 3431 Metal Sanitary Ware; 3432 Plumbing Fittings and Brass Goods; 3433 Heating Equipment Except Electric; 3441 Fabricated Structural Steel; 3442 Metal Doors, Sash and Trim; 3443 Fabricated Platework Boiler Shops; 3444 Sheet Metalwork; 3446 Architectural Metalwork; 3449 Miscellaneous Metalwork; 3451 Screw Machine Products; 3452 Bolts, Nuts, Rivets, and Washers; 3461 Metal Stampings; 3471 Plating and Polishing; 3479 Metal Coating and Allied Services; 3481 Miscellaneous Fabricated Wire Products; 3491 Metal Barrels, Drums and Pails; 3492 Safes and Vaults; 3493 Steel Springs; 3494 Valves and Pipe Fittings; 3496 Collapsible Tubes; 3497 Metal Foil and Leaf; and 3499 Fabricated Metal Products NEC.

Survey Results ; S.I.C. 34

There was a total of 534 facilities in this industry group divided into 369 small and 165 large. A total of 86 small facilities (23.3%) was surveyed with 16 or 18.6% generating 148,568 gallons of waste in 1976. Sixty-two large facilities (37.5%) were surveyed with 33 or 53.2% generating 736,426 gallons of waste in 1976.

The statistical survey with a 95% confidence indicated that the 369 small facilities within this code generated a total of 652,761 gallons of waste in 1976. The 165 large facilities statistically would have generated a total of 1,928,685 gallons of waste in 1976.

There was a fairly large variety of wastes found in the large fabricated metal products industry. Water soluble oil, paint wastes, plating sludges, and various types of solvents accounted for about 88% of the total volume recorded for this category. Volume for fourteen other types added up to the other 12% of the total. Several of the large facilities had more than one type of waste - one had as many as six.

Of the small facilities, six had two types of waste - none had more than this. There was a smaller percentage of small facilities with waste than there was of the large.

The data on Map No. 5 indicates the area of the state where the wastes in S.I.C. 34 were generated (from actual survey results).

Table No. 11

SIC-34 SMALL
FABRICATED METAL PRODUCTS
BREAKDOWN OF VARIOUS TYPES OF WASTES

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Iron oxide (Scale)	121,200	81.6%
Fiberglass and plastic	18,192	12.2%
Lubricating oil	2,953	2.0%
Water soluble oil	2,000	1.3%
Paint sludge	1,853	1.2%
Asphalt	1,212	0.8%
Plating and finishing sludge	856	0.5%
Varsol type solvents	200	0.1%
Chlorinated hydrocarbon solvents	100	0.07%
Adhesive	2	0.001%
TOTAL	148,568	

Table No. 12

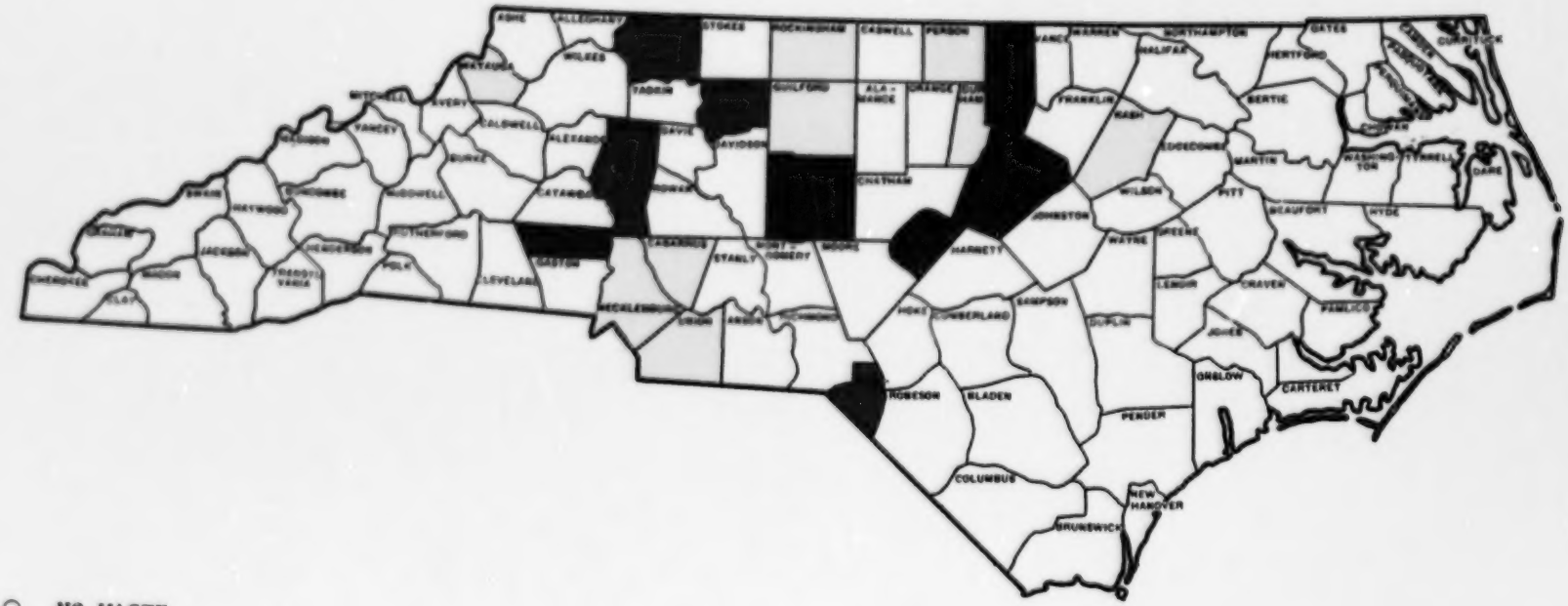
SIC-34 LARGE
FABRICATED METAL PRODUCTS
BREAKDOWN OF VARIOUS TYPES OF WASTES

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Water soluble oil	393,600	55.6%
Water soluble paint wastes	125,000	17.7%
Plating sludge (including cyanide)	64,921	9.1%
Paint type solvents	38,910	5.5%
Alkaline phosphate cleaners	24,825	3.5%
Scrap Rubber	18,180	2.6%
Paint sludge	16,761	2.3%
Ink sludge	5,500	.7%
Salt bath residue	5,050	.7%
Lubricating oil	4,980	.7%
Chromate aluminum chemicals	4,615	.6%
Detergent type cleaners	2,250	.3%
Chlorinated hydrocarbon solvents	2,050	.3%
Varsol type solvents	350	.05%
Rubber cement	180	.025%
Polystyrene insulation	145	.02%
Acid passivation chemicals (acids)	125	.017%
Fiberglass insulation	84	.01%
TOTAL	707,526	

NORTH CAROLINA

SIC-34
FABRICATED METAL PRODUCTS

Actual Survey Results



- ○ NO WASTE
- ● 1 - 5,000 GALLONS PER YEAR
- ○ 5,001 - 50,000 GALLONS PER YEAR
- ● 50,001 - 500,000 GALLONS PER YEAR

57

S. I. C. 35
Machinery Except Electrical

This major group (two digits) is divided into the following sub-groups (three and four digits): 3511 Steam Engines and Turbines; 3519 Internal Combustion Engines NEC; 352 Farm Machinery and Equipment; 3522 Farm Machinery; 3531 Construction Machinery; 3532 Mining Machinery; 3534 Elevators and Moving Stairways; 3535 Conveyors and Conveying Equipment; 3536 Hoists, Cranes, and Monorails; 3537 Industrial Trucks and Tractors; 3541 Machine Tools, Metal Cutting Types; 3542 Machine Tools, Metal Forming Types; 3544 Special Dies, Tools, Jigs and Fixtures; 3545 Machine Tool Accessories; 3548 Metalworking Machinery NEC; 3551 Food Products Machinery; 3552 Textile Machinery; 3553 Woodworking Machinery; 3555 Printing Trades Machinery; 3559 Special Industry Machinery NEC; 3561 Pumps and Compressors; 3562 Ball and Roller Bearings; 3564 Blowers and Fans; 3565 Industrial Patterns; 3566 Power Transmission Equipment; 3567 Industrial Furnaces and Ovens; 3569 General Industry Machinery NEC; 3573 Electronic Computing Equipment; 3579 Office Machines NEC; 3582 Commercial Laundry Equipment; 3585 Refrigeration Machinery; 3586 Measuring and Dispensing Pumps; and 3599 Miscellaneous Machinery Except Electrical.

Survey Results

There was a total of 700 facilities in this industry group, divided into 508 small and 192 Large. A total of 80 small facilities (15.7%) was surveyed with 26 or 32.5% generating 83,985 gallons of waste in 1976. Sixty-two large facilities were surveyed with 33 or 53.2% generating 3,704,769 gallons of waste in 1976, or a total of 3,788,754 gallons for large and small together.

The statistical survey with a 95% confidence indicated that the 508 small facilities within this code group in North Carolina generated a total of 533,400 gallons of waste in 1976. Similarly, the statistics show that the 192 large facilities generated a total of 11,472,768 gallons of waste in 1976. The total quantity within S.I.C. Code 35 was 12,006,168 gallons for the year.

Water soluble oil and lubricating oils together accounted for about 93% of the total wastes in the small facilities surveyed; all other percentages were minor - eight

other types added up to only about 7%. In the large facilities surveyed, the main types of wastes were ammonium nitrate solution, calcium fluoride sludge, water soluble oil, plating and finishing sludge, solvents and lubricating oil. Ten other minor wastes added up to only about 2% of the balance.

The data on Map No. 6 indicates the area of the state where the wastes in S.I. C. 35 were generated (from actual survey results).

Table No. 13

SIC-35 SMALL
MACHINERY EXCEPT ELECTRICAL - RESULTS FROM SURVEY

Breakdown of various types of wastes in machinery industry.
Total Gallons - 83,985

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Water soluble oil	74,930	89.2%
Lubricating oil	3,095	3.6%
Lacquer type solvent	1,800	2.1%
Paint booth sludge	1,783	2.1%
Varsol type solvent	975	1.2%
Oil and shavings	602	0.7%
Scrap caustic	400	0.47%
Chlorinated hydrocarbon solvents	350	0.41%
Paint stripper	30	0.03%
Phosphate sludge	20	0.02%
	TOTAL 83,985	

Table No. 14

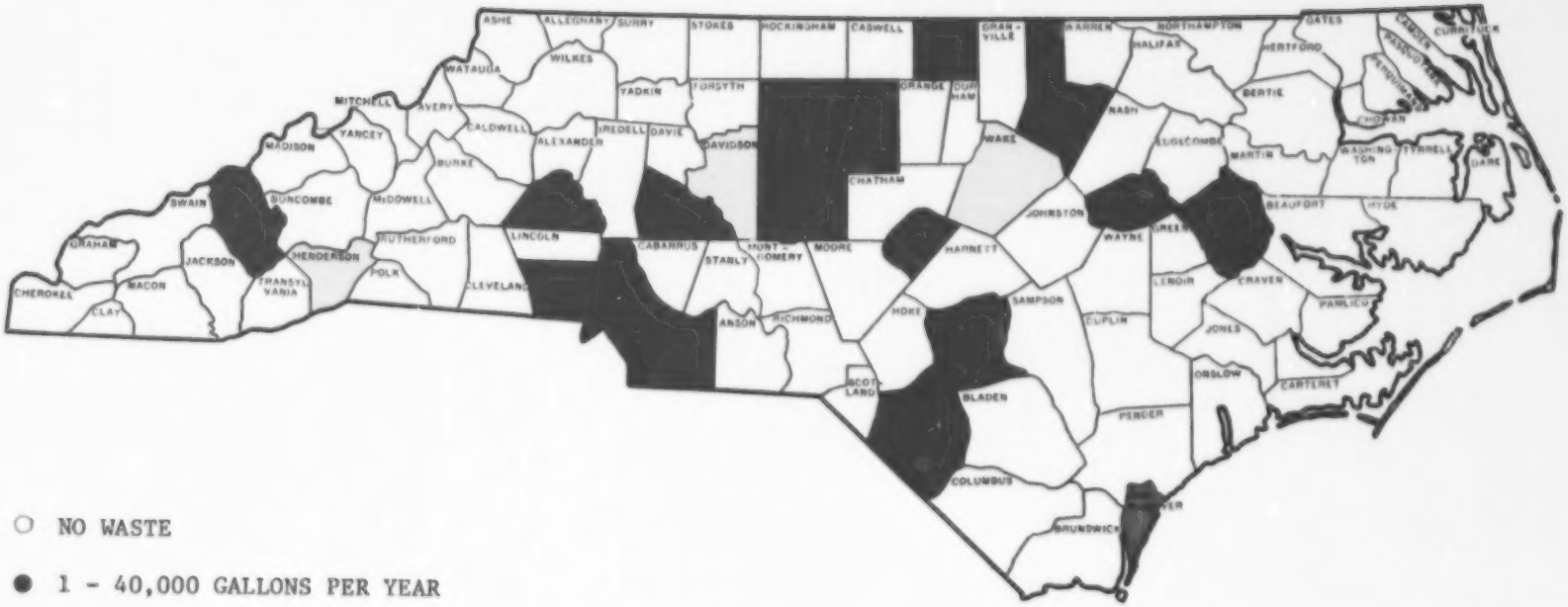
SIC-35 LARGE
MACHINERY EXCEPT ELECTRICAL - RESULTS FROM SURVEY

Breakdown of various types of wastes in machinery industry.
Total Gallons - 3,704,769

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Ammonium nitrate solution	1,800,000	48.6%
Calcium fluoride sludge	1,050,400	28.3%
Water soluble oil	429,668	11.6%
Plating and finishing sludge	192,263	5.19%
Lacquer type solvents	121,375	3.3%
Lubricating and hydraulic oil	37,970	1.0%
Dye Penetrant	25,000	.67%
Waste rubber cement	15,000	.4%
Paint booth sludge	14,986	.4%
Chlorinated hydrocarbon solvents	6,260	.17%
Heat transfer liquid	4,630	.1%
Varsol type solvent	4,570	.1%
Coiled steel spring wire	1,444	.03%
Magnesium metal fines and oxides	783	.02%
"Endox" sludge (cyanide)	220	.005%
Nitric acid	200	.005%
TOTAL	3,704,769	

NORTH CAROLINA

SIC-35
MACHINERY EXCEPT ELECTRICAL



○ NO WASTE

● 1 - 40,000 GALLONS PER YEAR

○ 40,001 - 400,000 GALLONS PER YEAR

● 400,001 - 4,000,000 GALLONS PER YEAR

62

S. I. C. 36
Electrical and Electronics Machinery, Equipment and Supplies

This major group (two digits)is divided into the following sub-groups (four digits): 3611, Electric Measuring Instruments; 3612, Transformers; 3613, Switchgear and Switchboard Apparatus; 3621, Motors and Generators; 3622, Industrial Controls; 3623, Welding Apparatus; 3624, Carbon and Graphite Products; 3629, Electrical Industrial Apparatus NEC; 3631, Household Cooking Equipment; 3634, Electric Housewares and Fans; 3639, Household Appliances NEC; 3641, Electric Lamps; 3642, Lighting Fixtures; 3643, Current Carrying Wiring Devices; 3651, Radio and TV Receiving Sets; 3652, Phonograph Records; 3661, Telephone and Telegraph Apparatus; 3662, Radio and TV Communication Equipment; 3679, Electronic Components NEC; 3691, Storage Batteries; 3692, Primary Batteries Dry and Wet; 3694, Engine Electrical Equipment; 3699, Electrical Equipment NEC.

Survey Results: S.I.C. 36

There was a total of 194 facilities divided into small (49 or less employees) with 66 facilities and large (50 or more employees) with 128 facilities. A total of 37 small facilities was surveyed with 18.9 percent or 7 facilities generating 100,628 gallons of waste in 1976. Fifty-one large facilities were surveyed with 72.5 percent or 37 facilities generating 355,594 gallons of waste in 1976.

The statistical survey with a 95 percent confidence indicated that the 66 small facilities in North Carolina generated a total of 179,520 gallons of waste in 1976, and the 128 large facilities generated 893,952 gallons or a total for S.I.C. 36 of 1,073,427 gallons in 1976.

There was not much variety in the types of wastes found in the small facilities; only five different types were noted. Most (95.8%) of the volume was a sulfuric-nitric acid waste. The wastes found during the survey of large facilities were more typical of the general fabricating type of industry; various inorganic chemical slurries, chlorinated hydrocarbon solvents, plating sludges, aluminum fines, water soluble oils, paint and paint solvents, lead sludge, oils and greases and various acid solutions.

Five other minor wastes totaled less than 1 percent altogether.

The data on Map No. 7 indicates the area of the state where the wastes in S.I.C. 36 were generated (from actual survey results).

Table No. 15

SIC-36 SMALL
ELECTRICAL EQUIPMENT AND SUPPLIES
BREAKDOWN OF TYPES OF WASTES

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Sulfuric - nitric acid mixture	96,500	95.8%
Ferric Chloride Solution	4,001	3.9%
Paint Solvent	65	0.06%
Paint Sludge	60	0.06%
Plating and Cleaning Sludge	2	0.002%
	100,628	

Table No. 16

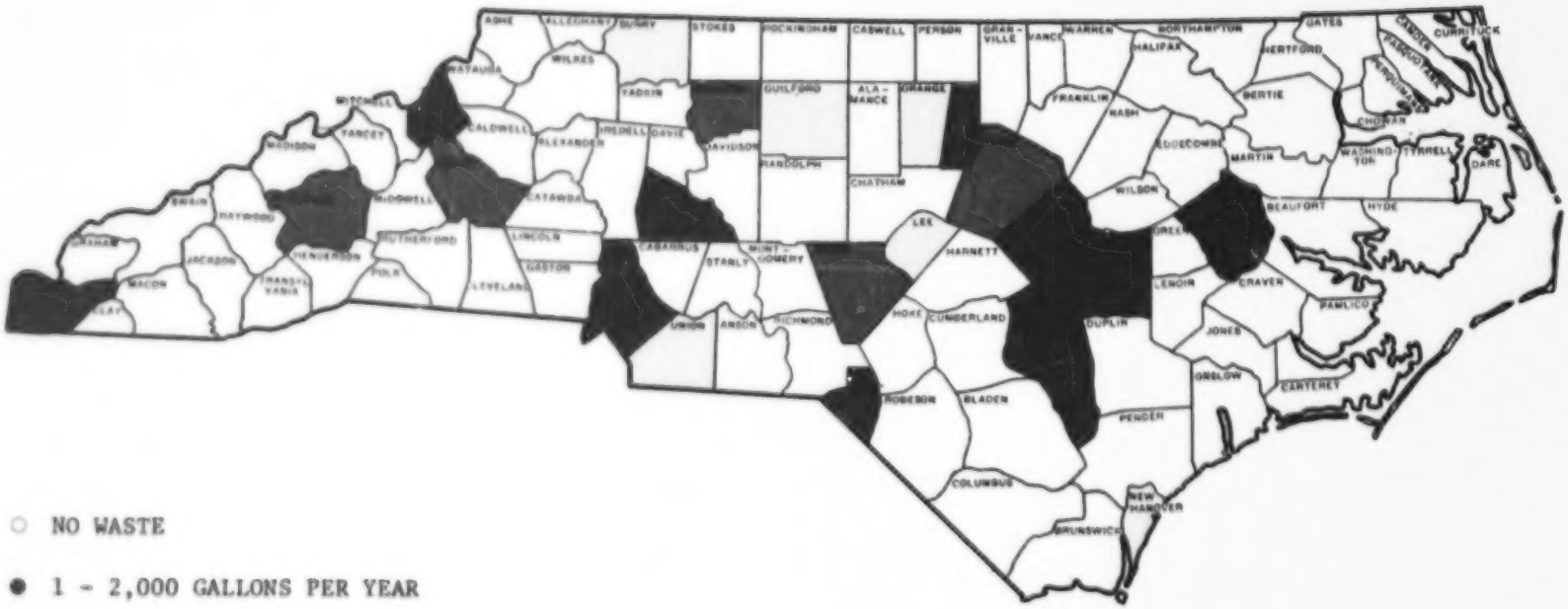
SIC-36 LARGE
ELECTRICAL EQUIPMENT AND SUPPLIES
BREAKDOWN OF TYPES OF WASTES

TYPE OF WASTE	QUANTITY (IN GALLONS)	% OF TOTAL QUANTITY
Inorganic Mixed Chemical Solutions and Slurries	105,760	29.7%
Chlorinated Hydrocarbon Solvents	50,955	14.3%
Plating Sludge	49,570	13.9%
Aluminum fines, buffing compounds	41,600	11.7%
Water soluble oils	37,430	10.5%
Paint and paint solvents	25,575	7.2%
Lead sludge	14,460	4.0%
Oils and greases	14,493	4.0%
Acids and acid solutions	13,020	3.6%
Resins and resin solvents	900	0.25%
Varsol type solvents	578	0.16%
*Radioactive waste	550	0.15%
PCB's and Mixtures	500	0.14%
Mercury Wastes	3	0.0008%
TOTAL	355,594 Gallons	

NORTH CAROLINA

SIC-36
ELECTRICAL AND ELECTRONICS MACHINERY,
EQUIPMENT AND SUPPLIES

Actual Survey Results

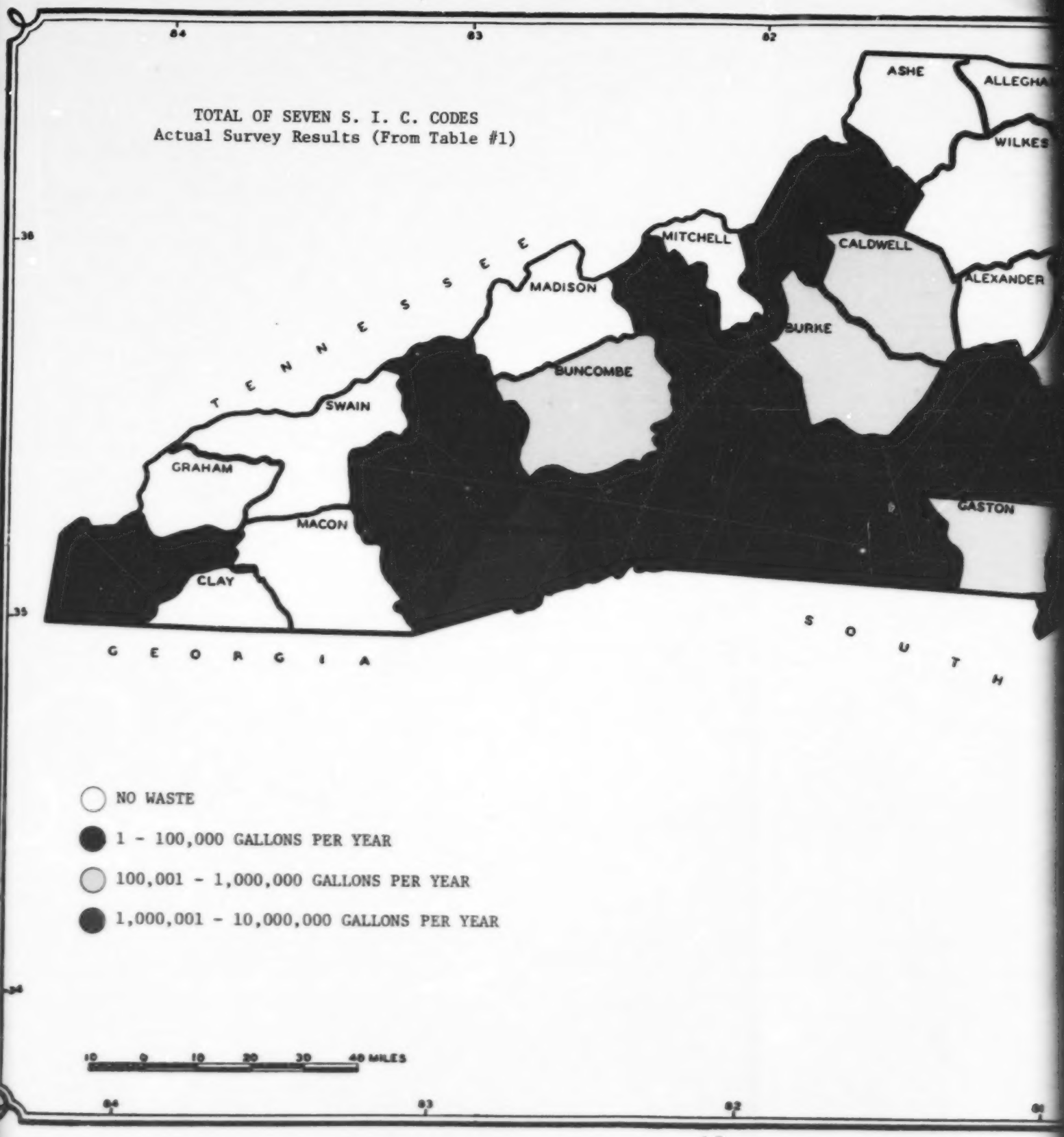


○ NO WASTE

● 1 - 2,000 GALLONS PER YEAR

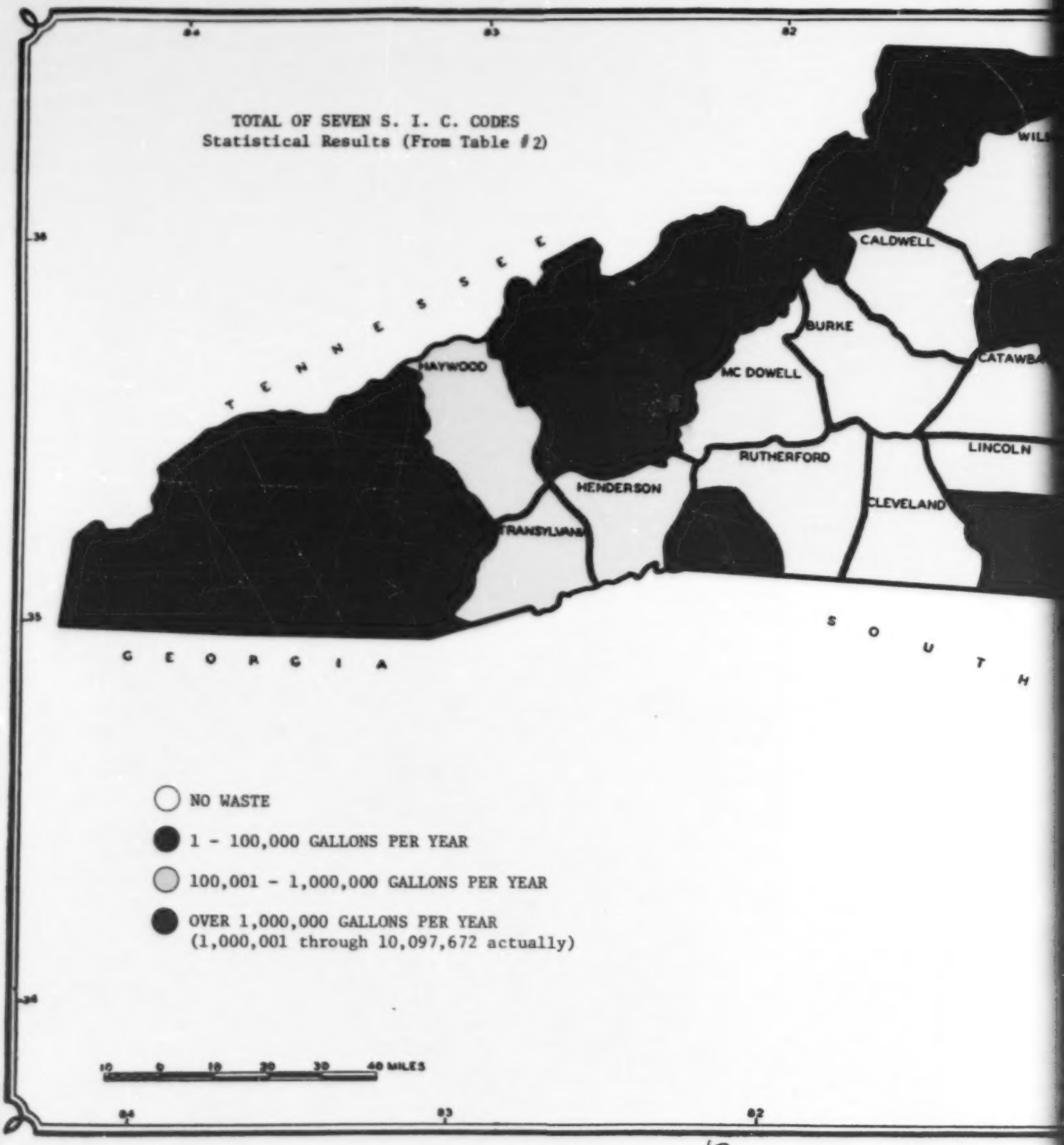
○ 2,001 - 20,000 GALLONS PER YEAR

● 20,001 - 200,000 GALLONS PER YEAR


TOTAL OF SEVEN S. I. C. CODES
Actual Survey Results (From Table #1)
84
83
82
ASHE
ALLEGHA
WILKES
MITCHELL
CALDWELL
ALEXANDER
MADISON
BURKE
BUNCOMBE
SWAIN
GRAHAM
MACON
CLAY
GASTON
TENNESSEE
GEORGIA
SOUTH
NO WASTE
1 - 100,000 GALLONS PER YEAR
100,001 - 1,000,000 GALLONS PER YEAR
1,000,001 - 10,000,000 GALLONS PER YEAR
10 0 10 20 30 40 MILES

81
80
79
78
V I R G I N I A
SURRY
STOKES
CASWELL
WARREN
YADKIN
FORSYTH
GUILFORD
IREDELL
DAVIE
DAVIDSON
WAKE
EDGECO
GREENE
LEE
HARNETT
LENOIR
CUMBERLAND
DUPLIN
ANSON
RICHMOND
SCOTLAND
ROBESON
BLADEN
PENDER
C A R O L I N A
BRUNSWICK
81
80
79
78

N I A
78
77
76
GATES
CURRITUCK
CAMDEN
PASQUOTANK
PERQUIMANS
CHOWAN
WARREN
BERTIE
ALBEMARLE SOUND
EDGECOMBE
WAKE
WASHINGTON
TYRRELL
DARE
PITT
BEAUFORT
HYDE
GREENE
LENOIR
PAMLICO SOUND
PAMLICO
DUPLIN
JONES
BLADEN
CARTERET
PENDER
BRUNSWICK
ATLANTIC OCEAN
36
35
34


TOTAL OF SEVEN S. I. C. CODES
Statistical Results (From Table # 2)
84
83
82
36
35
34
TENNESSEE
HAYWOOD
TRANSYLVANIA
HENDERSON
RUTHERFORD
MC DOWELL
BURKE
CALDWELL
CLEVELAND
LINCOLN
GEORGIA
SOUTH
NO WASTE
1 - 100,000 GALLONS PER YEAR
100,001 - 1,000,000 GALLONS PER YEAR
OVER 1,000,000 GALLONS PER YEAR
(1,000,001 through 10,097,672 actually)
10 0 10 20 30 40 MILES

81
80
79
78
V I R G I N I A
SURRY
ROCKINGHAM
PERSON
GRANVILLE
VANCE
WILKES
IREDELL
DAVIDSON
RANDOLPH
DURHAM
CHATHAM
CATAWBA
LINCOLN
CABARRUS
STANLY
MONTGOMERY
MOORE
LEE
HARNETT
SAMPSON
UNION
ANSON
RICHMOND
SCOTLAND
ROBESON
C A R O L I N A

MAP #9

78
77
76
GRANVILLE
VANCE
HALIFAX
GATES
CAMDEN
PASQUOTANK
HERTFORD
BERTIE
NASH
EDGECOMBE
MARTIN
ALBEMARLE SOUND
TYRRELL
PITT
BEAUFORT
HYDE
CRAVEN
PAMLICO SOUND
SAMPSON
JONES
NEW HANOVER
ATLANTIC OCEAN
36
35
34

O.M.B. No. 158-S76002
(9/30/77)

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
SOLID WASTE & VECTOR CONTROL BRANCH

INSTRUCTIONS FOR COMPLETION OF THE "DATA COLLECTION SURVEY FORM FOR HAZARDOUS OR DIFFICULT TO HANDLE WASTE"

PART A - GENERAL INFORMATION (Applicable for each facility surveyed)

Item 1 through Item 10 are self explanatory.

PART B - WASTE CHARACTERIZATION (Applicable to generators)

Item 1 - The type of waste generated from each plant operation (sludge, liquid, etc.).

Item 2 - What manufacturing process generates waste (platting, dying, etc.).

Item 3 - The quantity generated annually (cubic yards, gallons, etc.).

Item 4 - Waste Composition -- Elemental analysis results in milligrams per liter on a wet weight basis. Analysis should be on the final product following any pretreatment.

Item 5 - The product produced in the manufacturing process that generated the waste.

Item 6 - The quantity of product produced in generating the annual amount of sludge.

PART C - STORAGE METHODOLOGY (Applicable to generator)

Item 1 - Waste stored in drums, boxes, etc.

Item 2 - Quantity stored in gallons, cubic yards, etc.

Item 3 - Moved from generation area to storage area daily weekly, etc.

Item 4 - Waste transferred to storage in what type container.

PART D - TRANSPORTATION METHODOLOGY (Applicable to anyone that transports waste)

Item 1 - Waste transported in drums, tank cars, etc.

Item 2 - Name of waste generator.

Item 3 - Quantity collected in gallons, cubic yards, etc.

Item 4 - Name of facility waste is delivered to.

PART E - TREATMENT METHODOLOGY (Applicable to anyone that treats waste)

Item 1 - Composition of waste treated -- Elemental analysis results in milligrams per liter on a wet weight basis. Analysis should be on the final product following any pretreatment.

Item 2 - Gallons, cubic yards, etc.

Item 3 - Chem-fixed, volume reduction, neutralization, encapsulation, etc.

Item 4 - Mixers, centrifuges, etc.

(Continued)

PART F - DISPOSAL METHODOLOGY (Applicable to anyone that disposes of waste)

F-1: Land Disposal (Applicable to any type land disposal)

Item 1 - Type of Waste (liquid, sludge, etc.)

Item 2 - Composition of Waste -- Elemental analysis results in milligrams per liter on a wet weight basis. Analysis should be on the final product following any pretreatment.

Item 3 - Quantity in gallons, cubic yards, etc.

Item 4 - Type of disposal (landfill, lagoon, surface application, etc.).

Item 5 - Self explanatory.

Item 6 - Operating Procedures:

(a) Number of wells to monitor the ground water, methods used to identify and mark the location of types of waste, fences, etc.

(b) Containerization, mixed with other waste, encapsulation, etc.

(c) Type of treatment, if any.

(d) Routine physical and inorganic chemical.

F-2: Incineration

Item 1 - Liquid, sludge, or solid

Item 2 - Gallons, cubic yards, etc.

Item 3 - Composition -- Elemental analysis results in milligrams per liter on a wet weight basis. Analysis should be on the final product following any pretreatment.

Item 4 through Item 10 are self explanatory.

O.M.B. No. 158-S76002
(9/30/77)

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
SOLID WASTE & VECTOR CONTROL BRANCH

DATA COLLECTION SURVEY FORM FOR HAZARDOUS OR DIFFICULT TO HANDLE WASTE

PART A - GENERAL INFORMATION

Item 1 - Facility Name _____

Item 2 - Facility location _____

Item 3 - Facility Owner _____

Item 4 - Facility Mailing Address _____

_____

Item 5 - Facility Manager _____ Telephone No. _____

Item 6 - Facility Contact _____ Telephone No. _____

Item 7 - Time Period for Which Data is Representative _____

Item 8 - SIC Group Name & Four Digit Number _____

Primary _____ Secondary _____

Item 9 - Number of Employees _____

Item 10 - Average Daily Water Flow in Thousand of Gallons per Day _____

PART B - WASTE CHARACTERIZATION

Item 1 - Type of Waste _____

Item 2 - Origin of Waste _____

_____

Item 3 - Quantity of Waste Generated Annually _____

Item 4 - Waste Composition _____

_____

_____

Item 5 - Product Produced _____

Item 6 - Quantity per Year _____

PART C - STORAGE METHODOLOGY

Item 1 - Type of Storage _____

Item 2 - Quantity Stored _____

Item 3 - Frequency of Transfer to Storage Area _____

Item 4 - Method of Transfer to Storage Area _____

PART D - TRANSPORTATION METHODOLOGY

Item 1 - Method Used in Transportation _____

Item 2 - Source of Waste _____

Item 3 - Quantity _____

Item 4 - Destination _____

PART E - TREATMENT METHODOLOGY

Item 1 - Composition of Waste Treated _____

_____

_____

Item 2 - Quantity _____

Item 3 - Treatment Methods _____

_____

Item 4 - Equipment Used to Treat Waste _____

_____

PART F - DISPOSAL METHODOLOGY

F-1: Land Disposal

Item 1 - Type of Waste _____

Item 2 - Composition of Waste _____

_____

Item 3 - Quantity _____

Item 4 - Type of Disposal _____

F-1: Land Disposal (Continued)

Item 5 - Design Specifications: (a) Liner Type _____

(b) Liner Thickness _____ (c) Leachate Collection

_____ (d) Distance from Waste to Ground Water

_____

Item 6 - Operating Procedures:

(a) Land Site Security _____

_____

(b) Method of Burial _____

(c) Leachate Treatment Procedures _____

_____

(d) Type of Analysis Performed on Leachate and Ground Water Samples

_____

_____

F-2: Incineration

Item 1 - Type of Waste _____

Item 2 - Quantity _____

Item 3 - Composition _____

_____

Item 4 - Type of Incinerator _____

Item 5 - Rated Capacity _____

Item 6 - Auxillary Fuel Used _____ Amount _____

Item 7 - Design Specifications: (a) Temperature _____

(b) Dwell-Time _____ (c) Air Pollution Controls

_____

Item 8 - Air Pollution Permit _____

Item 9 - Residue Disposal _____

Item 10 - Waste Storage Prior to Incineration _____

_____